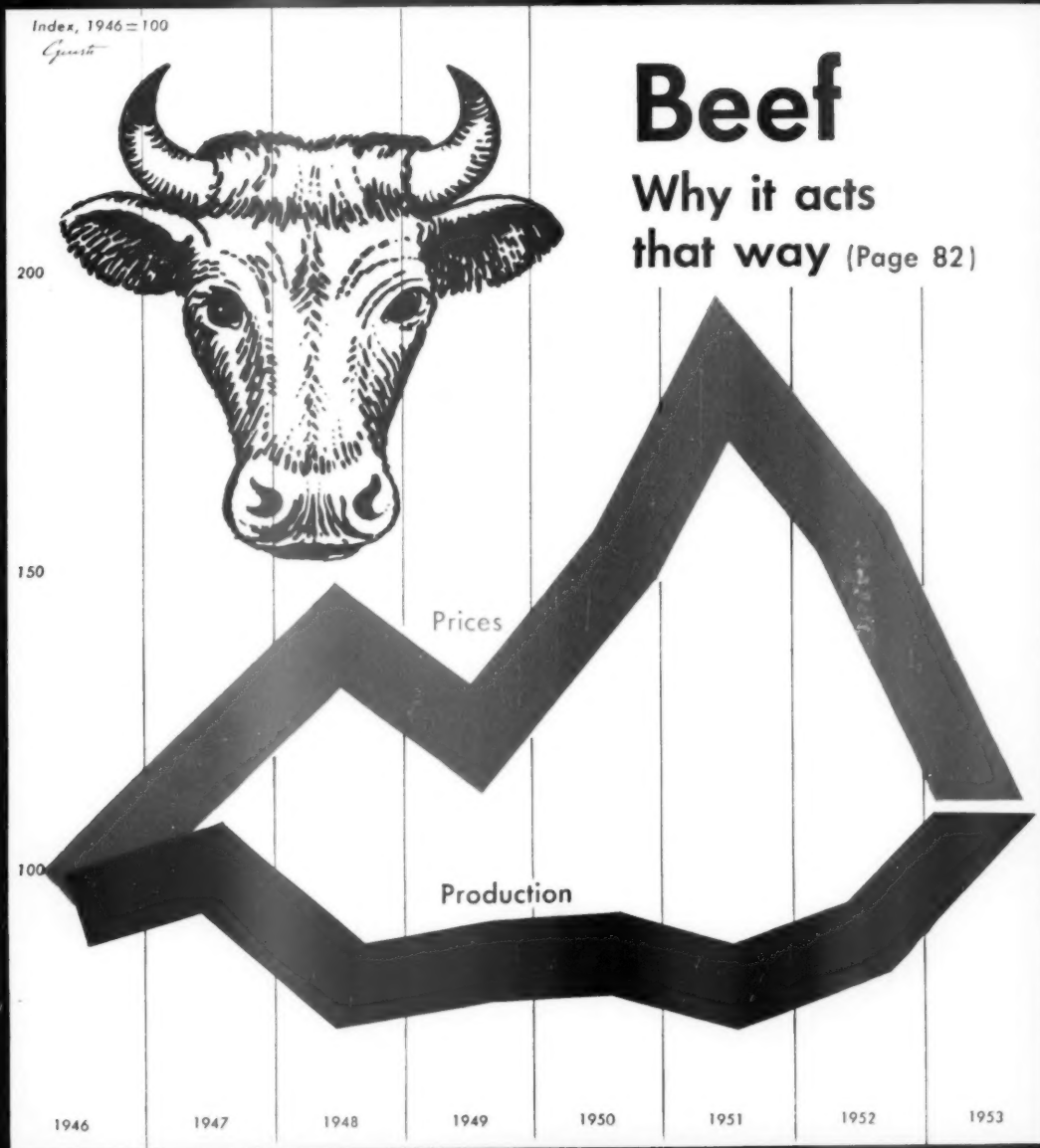
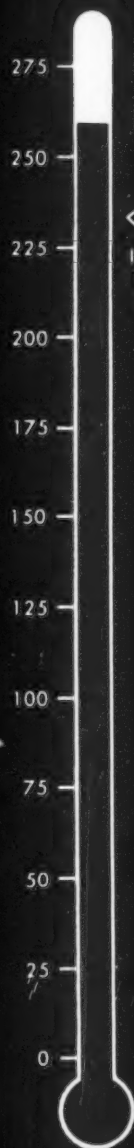


BUSINESS WEEK

INDEX ON PAGE 24



A MCGRAW-HILL PUBLICATION

AUG. 22, 1953

TWENTY-FIVE CENTS



“Nationals have saved us their cost many times over!”

BOWERY SAVINGS BANK, NEW YORK
“World’s Largest Mutual Savings Bank”

“We use National Accounting Machines exclusively, in all our offices, to record transactions completely at the windows, posting the depositor’s record and our record in one simultaneous operation.

“We started installing National Accounting Machines when they were first placed on the market 30 years ago. They have returned us their cost

many times over in savings in book-keeping expense . . . faster service to our more than 500,000 depositors . . . saving of valuable space . . . and by providing strong control.

“Our Nationals have been a highly profitable investment.”

R. W. Sparks
 1st Vice President

THE NATIONAL CASH REGISTER COMPANY, DAYTON 9, OHIO

There is a National System that will cut *your* costs, pay for itself out of the money it saves, then continue savings every year. National’s exclusive combination of features does up to $\frac{75}{100}$ of the work *automatically*. And employees like National’s ease of operation. Let your National representative show what *you* can save with the National System adapted to *your* needs.

National

ACCOUNTING MACHINES
 CASH REGISTERS

RESEARCH KEEPS

B.F. Goodrich

FIRST IN RUBBER



Better rubber products bring many kinds of savings

B. F. Goodrich improvements may make your plant more efficient

JUST changing to B. F. Goodrich grommet belts on this pulp beating machine in a paper mill (pictured above) saved \$250 a year in belt replacement costs alone—to say nothing of savings in lost machine time and savings from greater plant efficiency.


B. F. Goodrich cord conveyor belts often last 50 per cent longer than ordinary belts. Many kinds of B. F. Goodrich hose, tank linings, rolls and other rubber products have made similar savings. Sometimes there are savings in safety as well as money.

On the machine in the picture, belts had to run 24 hours a day. Ordinary V belts used to break and fly off the drive in four months. When the picture was taken the B. F. Goodrich grommet belts had already lasted four times as long as other belts used and still looked good.

Send this coupon if you would like more information. It is not necessary to write a letter. Just check any item you are interested in, print name and address in margin below (or pin to your company letterhead).

- | | |
|---|---|
| <input type="checkbox"/> V belts | <input type="checkbox"/> Flat transmission belts |
| <input type="checkbox"/> Conveyor belts | <input type="checkbox"/> Rubber springs or mountings |
| <input type="checkbox"/> Air hose | <input type="checkbox"/> Rubber rolls or rollers |
| <input type="checkbox"/> Steam hose | <input type="checkbox"/> Oil or gasoline hose |
| <input type="checkbox"/> Water hose | <input type="checkbox"/> Cements |
| <input type="checkbox"/> Fire hose | <input type="checkbox"/> Other products (please write in margin below.) |
| <input type="checkbox"/> Packing | |
| <input type="checkbox"/> Molded products | |
| <input type="checkbox"/> Rubber linings for tanks, pipe, fittings | |

Mail to The B. F. Goodrich Co.,
Dept. M-92, Akron, Ohio



Coming up...

22,000 malts every hour

*Link-Belt-engineered power
transmission provides high
efficiency for malt production*

THE malt that brings a gleam to the eyes of the nation's youngsters . . . the container it is mixed in . . . the counters at which they sit—all these familiar things and many others are produced with the help of Link-Belt equipment. In fact, almost every American every day is touched in some way by the engineering and mass production facilities of Link-Belt.

Yes, in practically any industry you can name, you'll find striking evidence of Link-Belt ingenuity at work in hundreds of conveying, processing and power transmission applications. From the start of the raw materials to the finished product, the equipment of this company moves the material and transmits the power. For full information call the nearby Link-Belt office. An experienced engineer will be glad to work with you.



**One source . . . one responsibility for materials
handling and power transmission machinery**

LINK-BELT COMPANY. Executive Offices: 307 N. Michigan Ave., Chicago 1. Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle; Scarboro, Toronto and Elmira, Ont. (Canada); Springs (South Africa); Sydney (Australia). Sales Offices, Factory Branch Stores and Distributors in Principal Cities. 13,326



Drying operation in Borden's malted milk factory at a rate of 600 pounds per hour demands accurate, positive power transmission. This integrated installation includes Link-Belt worm gear speed reducers, roller and silent chain drives, flexible couplings, roller bearings and shafting. Stocks of these and other Link-Belt products are immediately available from your nearby Link-Belt factory branch store or distributor.

B U S I N E S S W E E K

EDITOR & PUBLISHER Elliott V. Bell

MANAGING EDITOR Edgar A. Grunwald

EXECUTIVE EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn

ASSOCIATE MANAGING EDITOR John L. Cobbs

ASSOCIATE MANAGING EDITOR Peter French

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor*
Commodities: Gertrude Charloff, *Editor*
Finance: William McKee Gillingham, *Editor*; Paul D. Gesner
Foreign: Howard Whidden, *Editor*; Paul R. Miller, Jr., George F. King, Jr.
Industrial Production: Charles M. Garvey, *Editor*; George J. Gray, Jr.
Labor: Merlyn S. Pitzele, *Editor*; Edward T. Townsend
Management: Richard L. Waddell, *Editor*; John R. Thomas
Marketing: Carl Rieser, *Editor*; Cora Carter, Richard M. Wight
Personal Business: Guy Shipley, Jr., *Editor*
Regions: Richard M. Machol, *Editor*
Research: John K. Fockler, *Editor*
Illustration: Harry Jensen, Kate McSweeney, *Editors*; Richard A. Wolters (*Pictures-Photography*),
Robert Isear, Herbert F. Kratochvil, Jomary Mosley, Arthur Richter
Special Projects: Frank J. Fogarty
The Trend: M. J. Rossant
Library: Dorothy Roantree, *Librarian*; Emily Cherry, Ruth Callanan
Assistant to the Editor & Publisher: John F. Hartshorne

NEWS EDITORS

Marilyn T. Benjamin, T. B. Crane, Robert F. Deed, Maxwell D. Gunther, Doris I. White

EDITORIAL ASSISTANTS

David B. Carlson, Marguerite G. Cronin, D. A. Drennen, Jean Drummond, Alice Marks, Mary Maguire, Dorothea Schmidt

ECONOMICS STAFF

Dexter M. Keezer, *Director*; Peter J. Davies, Richard Everett, Howard C. Gary, Douglas Greenwald, Margaret Matulis, Robert P. Ulin

DOMESTIC NEWS SERVICE

Chicago Bureau: James M. Sutherland, *Manager*; Mary B. Stephenson, Dorothy Miller
Cleveland Bureau: Robert E. Cochran, *Manager*; Jean H. Henderson
Detroit Bureau: Stanley H. Brams, *Manager*; James C. Jones, Jr., Glenna Sotier McWhirter
Houston Bureau: Eugene Miller, *Manager*
Los Angeles Bureau: Thomas M. Self, *Manager*
Pittsburgh Bureau: Richard N. Larkin, *Manager*
San Francisco Bureau: Richard Lamb, *Manager*; Joanne O'Brien
Washington Bureau: George B. Bryant, Jr., *Manager*; Glen Bayless, Carter Field, Jay Flocken, Boyd France, Joseph Gambatese, Sam Justice, William H. Kearns, John L. Kent, Donald O. Loomis, Jesse Mock, Gladys Montgomery, Arthur L. Moore, Morton A. Reichel, Caroline Robertson, Vincent Smith, W. B. Whitchard, Jr.
Correspondents: Akron, Albany, Altoona, Atlanta, Austin, Baltimore, Birmingham, Boston, Buffalo, Charleston, Charlotte, Cincinnati, Columbus, Concord, Dallas, Denver, Des Moines, Duluth, Fort Worth, Green Bay, Greensboro, Harrisburg, Hartford, Jacksonville, Kansas City, Knoxville, Little Rock, Memphis, Milwaukee, Minneapolis, Nashville, New Orleans, Oklahoma City, Orono, Philadelphia, Phoenix, Portland, (Ore.), Providence, Richmond, Rochester, Salt Lake City, San Antonio, San Diego, Seattle, St. Louis, Syracuse, Toledo, Wilmington, Worcester, Honolulu.

FOREIGN NEWS SERVICE

Editor: Joseph K. Van Denburg, Jr.
Frankfurt: Gerald W. Schroder
London: Nathaniel McKitterick
Manila: Herbert Leopold
Correspondents: Amsterdam, Athens, Bangkok, Beirut, Belgrade, Bogota, Bombay, Brussels, Buenos Aires, Cairo, Caracas, Ciudad Trujillo, Copenhagen, Djakarta, Durban, Geneva, Guatemala City, Havana, Helsinki, Istanbul, Johannesburg, Karachi, La Paz, Lima, Madrid, Melbourne, Oslo, Ottawa, Panama City, Quito, Reykjavik, Rome, Salzburg, San Juan, San Salvador, Santiago, Stockholm, Sydney, Tehran, Tel Aviv, Wellington, Winnipeg.
Mexico City: John Wilhelm
Paris: Ross Hazeltine
Sao Paulo: Lionel J. Holmes
Tokyo: Alpheus W. Jessup

ADVERTISING & BUSINESS MANAGER Herman C. Sturm

BUSINESS WEEK • AUG. 22 • NUMBER 1251

(with which are combined The Annalist and the Magazine of Business) • Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder • Publication Office: 99-129 North Broadway, Albany, N. Y. • Editorial, Executive and Advertising Offices: 430 West 42nd St., New York 36, • Curtis W. McGraw, President; Willard Chevalier, Executive Vice-President; Joseph A. Gerardi, Vice-President and Treasurer; John J. Cooke, Secretary; Paul Montgomery, Senior Vice-President; Publications Division: Ralph B. Smith, Vice-President and Editorial Director; Nelson Bond, Vice-President and Director of Advertising. Subscriptions: Address correspondence regarding subscriptions to J. E. Blackburn, Jr., Vice-

President and Director of Circulation, Business Week, 99-129 N. Broadway, Albany 1, N. Y., or 330 West 42nd St., New York 36. Allow one month for change of address. Subscriptions to Business Week are solicited only from management-men in business and industry. Position and company connection must be indicated on subscription orders. Single copies 25c. Subscription rates—United States and possessions \$6.00 a year; \$13.00 for three years. Canada \$7.00 a year; \$14.00 for three years. Other Western Hemisphere countries \$15 a year; \$30.00 for three years • All other countries \$25 a year; \$50.00 for three years • Entered as second class matter Dec. 4, 1936, at the Post Office at Albany, N. Y., under Act of Mar. 3, 1879 • Printed in U. S. A. Copyright 1953 by McGraw-Hill Publishing Co., Inc. — All Rights Reserved.

"We Could Not Justify
Using Other Than
ELECTRIC
TRUCKS"



So says The Leslie Salt Co., users of all types of power in their equipment producing 200,000 tons of salt per year. But handling of packaged salt in their plant is done exclusively by Elwell-Parker **ELECTRIC** trucks. Leslie Salt knows by experience that fume-free E-P electrics are usually less expensive to operate and maintain . . . Elwell-Parker makes trucks with **ALL** motive powers—electric, gas-electric and gas. Each has its advantages under certain operating conditions. For unbiased and *experienced* advice about which is best for your needs, consult Elwell-Parker.

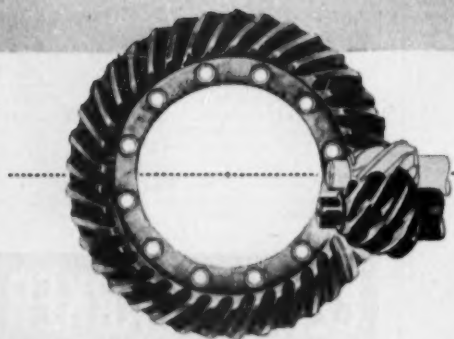
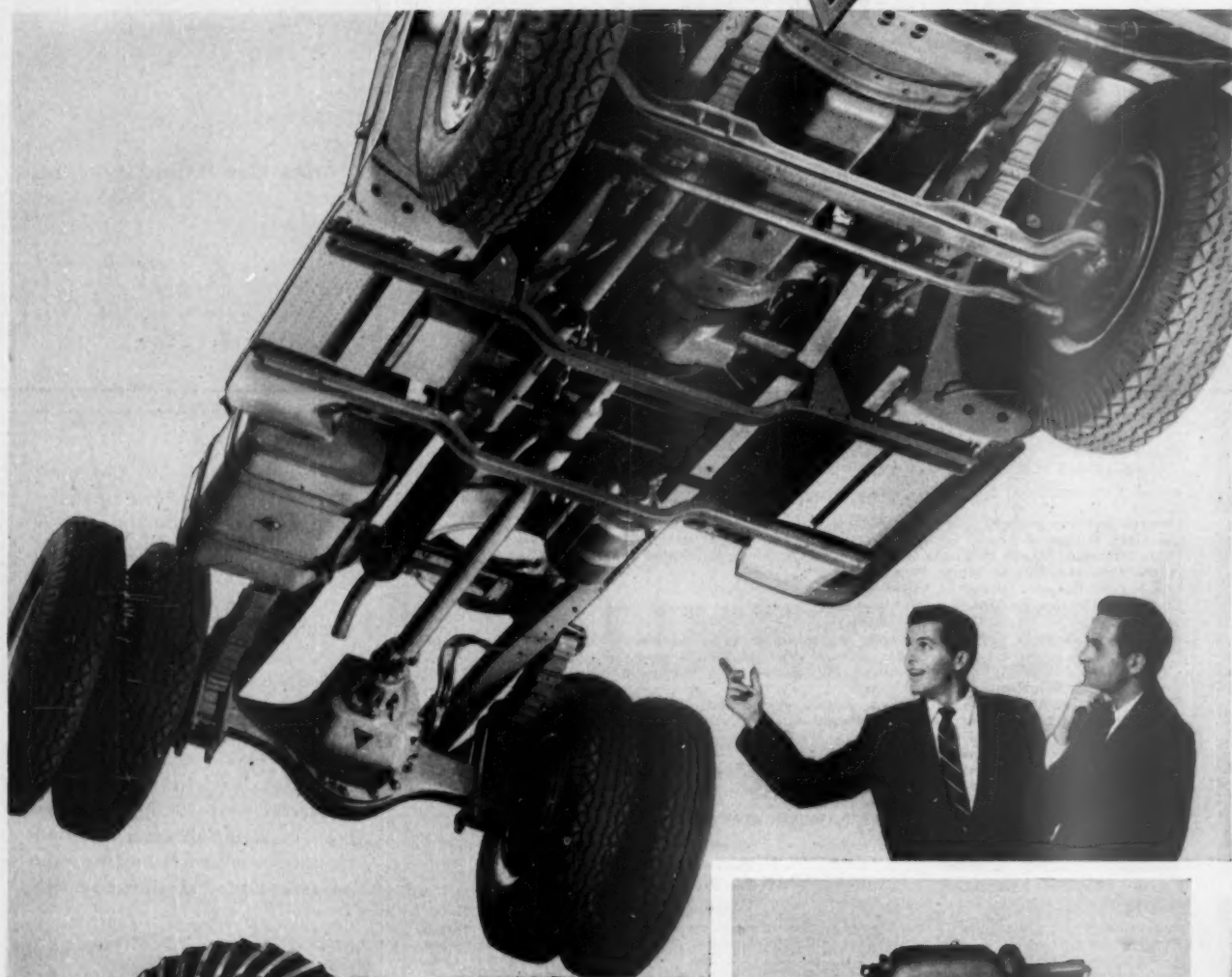
FREE CATALOG

describes over 80 sizes and models of trucks, explains advantages of each type. Write The Elwell-Parker Electric Co., 4009 St. Clair Avenue, Cleveland 3, Ohio.



ELWELL-PARKER
Power Industrial Trucks
Since 1906

THE MARK OF



The Hypoid pinion is offset from the centerline of the gear. The pinion is bigger and stronger. Bearings are bigger. More teeth are in contact, reducing load per unit of contact area. Torque-transmitting capacity is increased. Slower gear ratios are practical without loss of strength.



Two-Speed Double-Reduction Final Drives offer the advantage of both speed and pulling power in on- and off-highway operation. Any speed, load or road condition can be met with the built-in TDA Spring-Flex Power Shift.

A MODERN TRUCK

Today's modern trucks are distinguished by dependable TDA Axles with such important features as *Hypoid gearing*, which means longer vehicle life, lower maintenance costs, higher operating profits.

When you stop to think of it, the work a motor truck can do depends pretty much on *what's underneath!* Take the axles that carry, move and stop the load. Dependability here is simply vital. Going a step further, advanced axle engineering is often the crucial difference between a truck that *makes money* and one that *costs money*.

With nearly half a century of specialized experience at their disposal, TDA engineers have worked out a wealth of axle improvements—

heavy-duty Hypoid gearing, "3 for 1" final drive interchangeability, Spring-Flex Power Shift, Full-Corner Housings, Straight-Line Drive, and many others. Each of these advances serves either to make trucks operate more efficiently, or last longer, or require less time and money for their upkeep.

That is why both truck manufacturers and users place so much importance on the phrase "TDA-equipped." They know it assures them of practical advantages nothing else can provide.



THE TIMKEN-DETROIT AXLE COMPANY • DETROIT 32, MICHIGAN
WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS

PLANTS AT: Detroit and Jackson, Mich. • Oshkosh, Wis.
Utica, N. Y. • Ashtabula, Kenton and Newark, Ohio
New Castle, Pa.



Whatever your trucking job, there's a TDA Axle to fit your needs. The flexibility of TDA "3 for 1" Axles allows truckers to choose the right final drive—Single-Reduction, Double-Reduction, Two-Speed Double-Reduction—to do any trucking job.



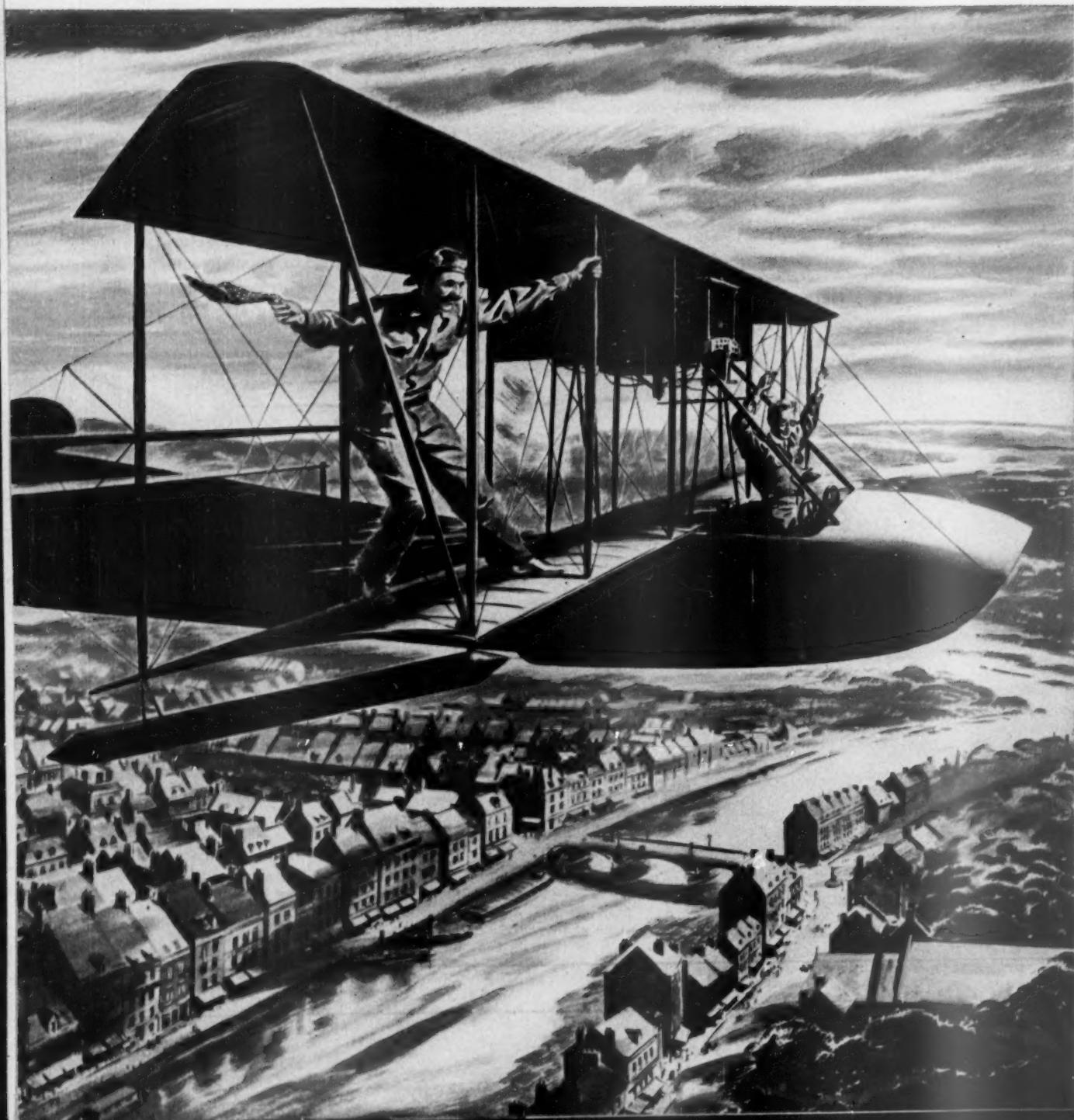
WITHOUT MOTOR TRUCKS MORE THAN 25,000
U. S. COMMUNITIES COULD NOT EXIST!

There are more than 25,000 communities in the United States with no other means of freight transportation than the motor truck. They depend entirely on motor transport for the fast, safe delivery of goods and conveniences which make up America's high standard of living. These small cities and towns owe their very existence directly to motor trucks.

1912 Lawrence Sperry, at 19, flew automatically with the first Sperry Stabilizer at Hammondsport, New York. Later, in a Curtiss flying boat, he competed in 1914 with 80 entrants for an award offered by the French for the first "stable airplane." Sperry won—in a dramatic demonstration in which the little plane flew by itself while Sperry held his hands above his head and his mechanic walked on the wing.



AUTOMATIC



FLIGHT... another Sperry first... 1912

From the day in June, 1914, when Lawrence Sperry won the French War Department's 50,000 franc prize for the first "stable airplane," Sperry has taken the lead in making flying more and more automatic . . . as flying itself has required more and more precision. From the first simple stabilizers have come development after development, such as the Sperry Automatic Pilot and Automatic Approach Control to guide planes to better landings under all weather conditions.

TODAY, AS ALWAYS, SPERRY LEADS THE WAY

In production today at Sperry are instruments that give man even greater mastery of the elements. And the military demand is so great that hundreds of subcontractors are now sharing with Sperry the task of meeting these requirements.



1933 Wiley Post in the Winnie Mae made first solo, round-the-world flight. Using the Sperry Automatic Pilot, Post startled the world by stating that during flight he was able to take naps while the plane, under automatic control, flew itself. Post explained that a wrench tied to his fingers slipped from his hand to awaken him if he fell sound asleep, so he could check his course and make course changes if necessary.



1946 United Air Lines installed Sperry A-12 Gyropilot on four-engine fleet to insure precise automatic instrument approaches to airport runway. UAL President, W. A. Patterson, considered installation . . . "a definite start in eliminating weather as an obstacle to airline operations."



1953 USAF's Boeing B-47B is equipped with Sperry Gyropilot, combining the latest in gyroscopic, servo, and signal system techniques. This automatic flight control system meets strategic requirements for high-altitude, long-range missions and automatic precision bombing runs.



19?? Automatic flight of tomorrow? Sperry laboratories are now busily solving automatic control problems for jets and missiles of the future. When they fly, precision automatic devices being developed by Sperry today will control them.

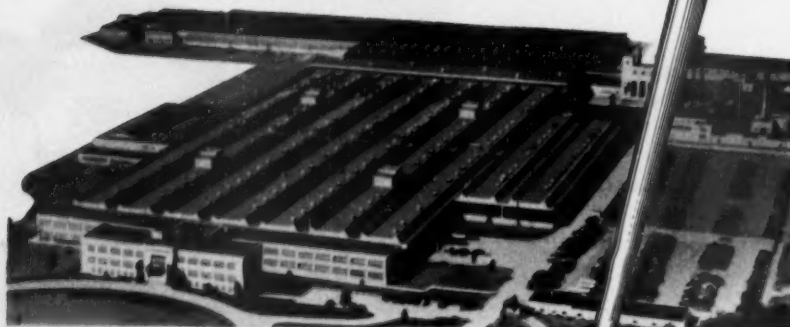
SPERRY **GYROSCOPE COMPANY**
DIVISION OF THE SPERRY CORPORATION
GREAT NECK, NEW YORK



One of a Series of Advertisements Commemorating the 50th Anniversary of Powered Flight.

industry counts on

Thompson Products



Thompson Products, Inc., "Tapco" Plant at Cleveland

Engine Valve . . . one of Many Thompson Products

as Thompson counts on Dearborn

In the production of automotive valves, pistons and other precision products, Thompson knows the money-saving value of complete corrosion-free protection. That's why Dearborn NO-OX-ID protects valuable parts during long and short term storage in the several Thompson plants.

Many nationally famous firms . . . like Thompson Products . . . rely on Dearborn products to guard against rust wherever it occurs—in manufacturing—in storage—in maintenance. Consult with a Dearborn Engineer. He will recommend the Dearborn Service best suited to your needs.

WHY YOU CAN RELY ON *Dearborn*

Dearborn has specialized in the conditioning of water and the control of corrosion since 1887. This broad experience in water treatment and rust prevention—plus Dearborn's extensive laboratory and research facilities—are at your service . . . at no obligation. You'll find it will pay to . . .



◀ know your Dearborn engineer

Dearborn

COMBATting CORROSION EVERYWHERE SINCE 1887

Dearborn Chemical Company • Merchandise Mart Plaza, Chicago 54, Ill.

READERS REPORT

Tax-free Benefits

Dear Sir:

In your issue of July 18, on page 120, you state the following: "Contributions paid by an employer into a trust fund for group insurance, vacation benefits, or health plans are not wages subject to tax withholding. However, money actually distributed to an employee from such a fund is taxable as income for the employee."

I believe the above statement is misleading and would appreciate your clarification of it. It is my understanding, and that of our law department, that group insurance benefits received by an employee, even though they are a result of contributions of an employer into a trust fund, are not taxable to the employee when received. . . .

WILLIAM A. TROMBLEY

REGIONAL GROUP MANAGER
HOME LIFE INSURANCE CO. OF
NEW YORK
NEW YORK 7, N. Y.

• Treasury Department confirms your understanding. It also says that contributions into the fund, or premiums if insurance is bought, are not taxable income.

Just the Chaplain

Dear Sir:

. . . Thank you for the very objective and informative article on the ACTU that appeared in the July 18 issue (page 122).

It is not often that one can read a story about the ACTU that adheres so closely to the facts.

We would, however, like to offer one slight correction. The caption under the picture of Father Charles Owen Rice states that he "runs alongside the group but isn't a member." Actually Father Rice is the chaplain of the Pittsburgh ACTU chapter and has held that position for the past 15 years. . . .

ROBERT J. MOZER

EXECUTIVE SECRETARY
ASSOCIATION OF CATHOLIC TRADE
UNIONISTS
NEW YORK, N. Y.

New Jobs for Ceramics

Dear Sir:

It was with a great deal of pleasure that we read the article in your July 11 issue (page 41) entitled Baked Clay Joins the Jet Age, as we . . . are engaged in all phases of porcelain enamel work.

. . . We were particularly interested in that section of the article which dealt with high temperature ceramic coatings.

THE CHAMBERSBURG

IMPACTER

THE NEW, UNIQUE HAMMER THAT FORGES WITHOUT SHOCK OR VIBRATION—WITHOUT ANVIL OR HEAVY FOUNDATION!

FORGING DIES ARE KEYED TO OP-
POSING RAMS OR IMPELLERS—ARE
IN CONTACT WITH THE STOCK FOR
ONLY A FRACTION OF A SECOND
AT THE INSTANT OF FORGING.

STOCK MAY BE HELD BY MANY DIF-
FERENT HANDLING DEVICES—MAY BE
FED BY HAND OR AUTOMATICALLY

NO SPECIAL FOUNDATION OR FAS-
TENING REQUIRED. THE WORK AB-
SORBS THE FORCE OF THE FORGING
BLOW.

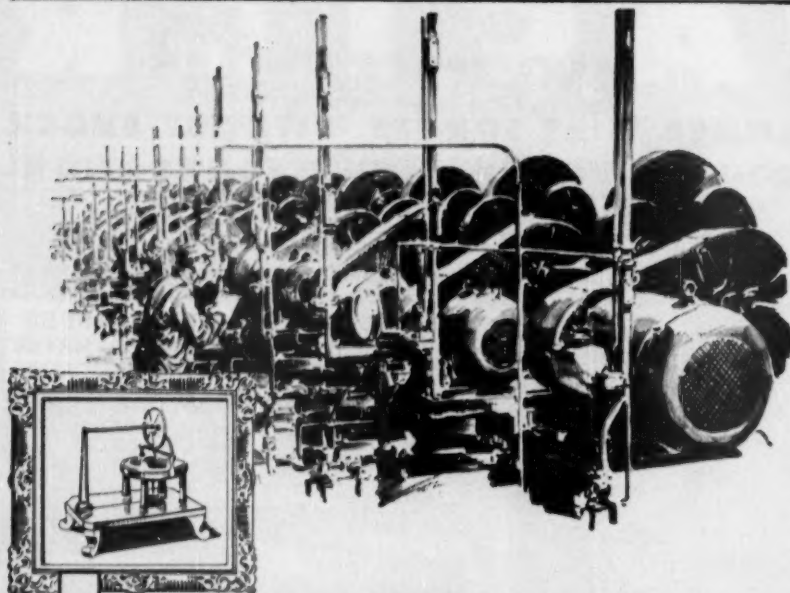
THE STOCK IS POSITIONED BETWEEN
THE DIES, TOUCHING NEITHER OF
THEM AND IS STRUCK EQUALLY ON
BOTH SIDES GIVING UNIFORM
WORKING OF THE METAL.

The Chambersburg Impacter represents a radical new concept of the forging process. The shockless operation of the Impacter permits the use of mechanical locating and positioning devices not possible in previous forging methods. These devices, in turn, increase the accuracy of the forging and

speed production while reducing the skill required for operation. "Impacting", forging in mid-air, is an innovation in the forging process that deserves investigation, for it presents limitless possibilities to manufacturers—in manual, semi-automatic or automatic production of "drop" forgings.

CHAMBERSBURG ENGINEERING COMPANY
CHAMBERSBURG, PA.

DOW CORNING SILICONE NEWS



We've outgrown Mrs. Davenport's petticoat

Our dependence upon electricity has grown fast since 1837 when Tom Davenport used his wife's petticoat to insulate the first electric motor. Now electricity cooks and freezes for us; turns night to day. It carries sights and sounds through the air; drives the machines that make mass production possible.

But improvements in the insulating materials that harness electricity have lagged behind. The greatest single improvement came less than ten years ago when Dow Corning introduced the first silicone resins. Chemical cousins of glass, these resins complement glass cloth, mica and asbestos. They double the power per pound ratio in electric machines; multiply their life expectancy by ten. Here's a typical example of what that means. To increase output of chemicals, engineers

rewound 31 motors with Silicone (Class H) Insulation; increased pumping capacity by 30%; saved \$50,000.

Rated at 50 and 60 hp, those motors were rebuilt with Class H insulation to deliver 75 to 90 hp. It would have cost \$68,200 to install new, conventional 75 hp motors. Rewinding cost only \$19,000. And failure rate on the old 50 and 60 hp motors was one a month, 48 failures in 4 years. Rewound with Class H insulation, those same motors have delivered at least 50% more power for 4 years with only 6 failures. Equally useful in the form of fluids, lubricants, protective coatings, water repellents and rubbery solids it will pay you to find out how

Dow Corning Silicones Save Money, Increase Sales

mail this coupon today

DOW CORNING CORPORATION
Dept. E-8, Midland, Michigan

Please send me

- ☐ Performance Data on Class H
☐ Tall Tales to Fabulous Facts

(Name) _____

(Company) _____

(Address) _____

(City) _____

(Zone) _____

(State) _____

First
in
Silicones

DOW CORNING
CORPORATION

Atlanta
Chicago
Cleveland
Dallas
Detroit

Midland, Michigan

Los Angeles
New York
Washington, D. C.
(Silver Spring, Md.)

Canada: Fibreglas Canada Ltd., Toronto
England: Midland Silicones Ltd., London

For the last two years we have been doing extensive work with high temperature ceramics and their application to jet engine parts. Recently we have expanded our endeavors in this field to include applications for various commercial airlines. As was true with our work on jet engine parts, high temperature ceramic coatings for components of commercial airline engines give great promise of prolonging the life of these parts as much as five or six times.

Within the next few years, it is not inconceivable that the "hot parts" of all engines, both of the reciprocating, turbo-jet and plain jet, will be coated with high temperature ceramics. Not only will these coatings make for greater engine efficiency, but they will also be extremely economical. . . .

R. A. WEAVER, JR.

PRESIDENT
THE BETTINGER CORP.
WALTHAM, MASS.

Dear Sir:

The article, Baked Clay Joins the Jet Age, in the July 11 issue (page 41) of your publication, missed out on one new and wide use of ceramics—the ferrites. The ferrites are a mixture of iron oxides and other metallic oxides such as manganese zinc oxide or nickel zinc oxide. . . . This material was originally developed in Holland during World War II, under the noses of the Nazis. The ferrite rod antennas which have made present pocket portable radios possible, and the improved low-cost focusing and deflection systems for television sets, are examples of the rapid growth of ferrite ceramics in the electronics industry. . . .

S. L. CHERTOK

SPRAGUE ELECTRIC CO.
NORTH ADAMS, MASS.

Progress Report

Dear Sir:

Permit me to congratulate you on your excellent Labrador article in your July 18 issue (page 82).

Excellently written, it presented intelligently and understandably the many problems connected with the project. Of particular interest was the way in which it reported on the progress being made.

I feel certain that your treatment of this subject will receive widespread attention.

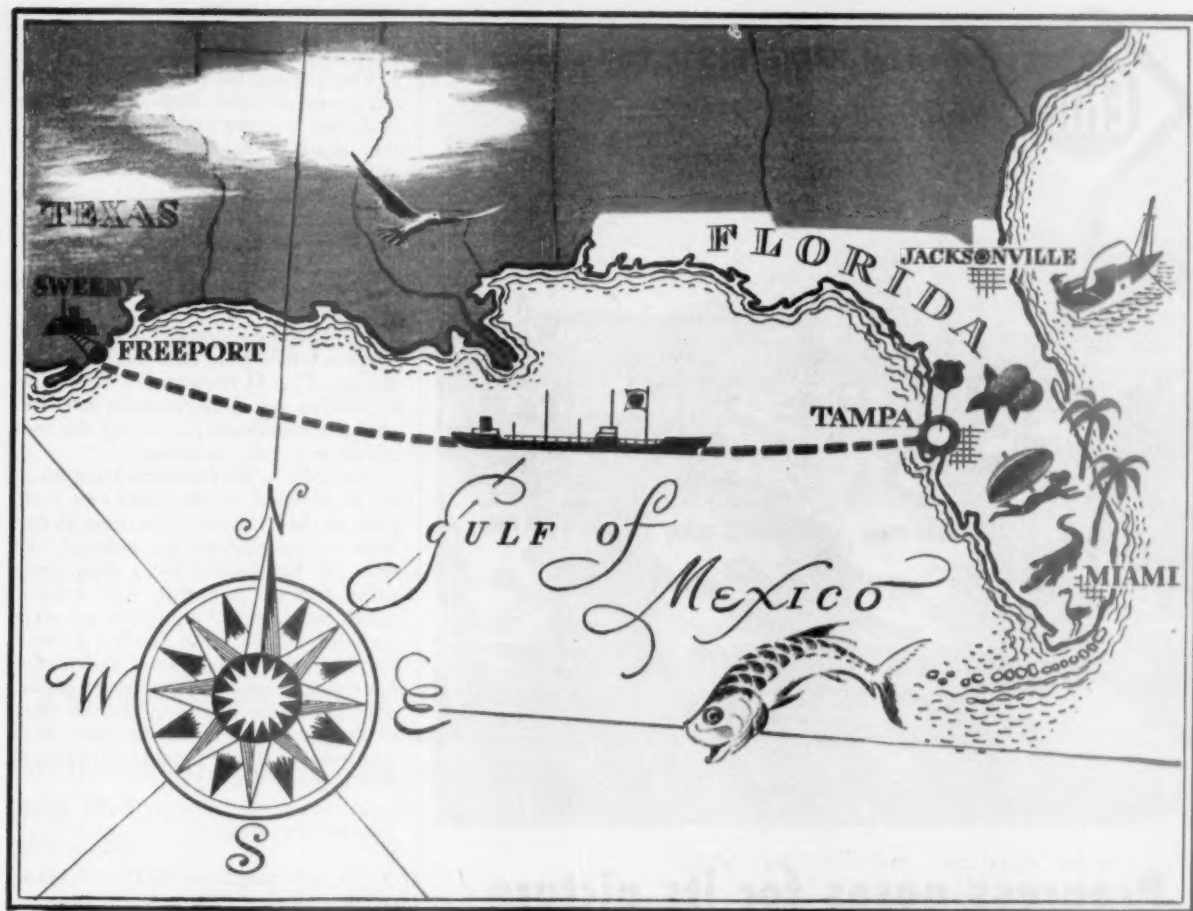
HARRY LUNDIN

BAY VILLAGE, OHIO

National Issue?

Dear Sir:

I have noted your article, Farmers—Everyone's Headache Again [BW—Jul. 18'53,p29] . . . and I wish to take exception to the way this is presented. I



THE FLORIDA STORY

THE NEWEST PHILLIPS 66 marketing territory is Florida. Why Florida? Because it is good business. Good for Florida. Good for Phillips.

Florida offers Phillips an expanding market. A market that Phillips can supply by economical tanker transportation from its modern refinery in Sweeny, Texas. Phillips offers Florida an established company, selling high quality petroleum products that supply an essential need.

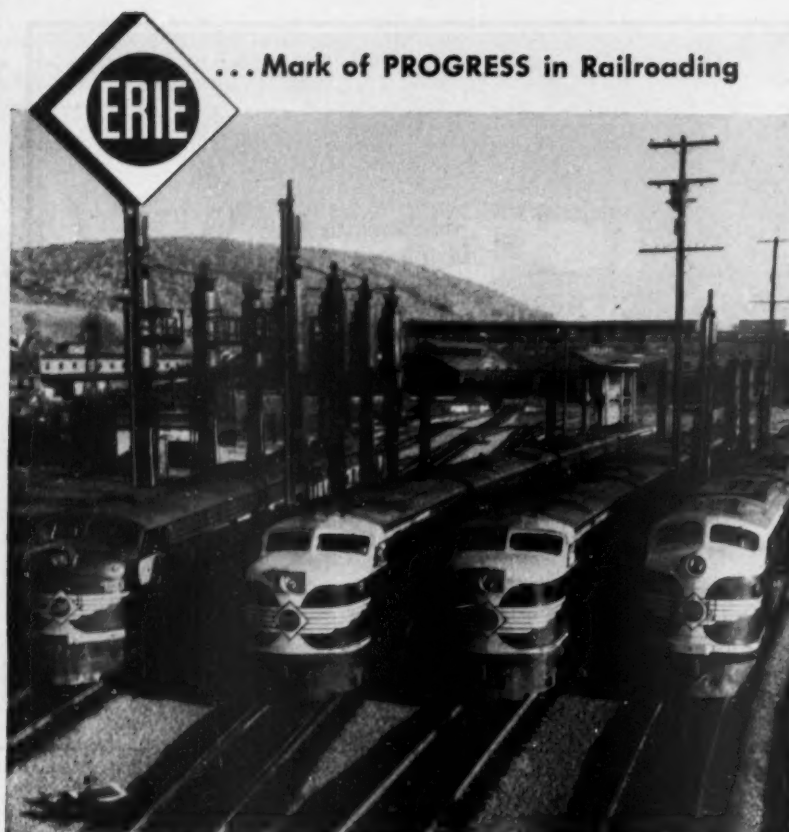
Such good business moves are responsible for the rapid growth of Phillips Petroleum Company. In a little over 25 years, Phillips has expanded from a single service station in Kansas to the distribution of refined petroleum products in over 16,500 marketing outlets. Phillips territory now extends from the Canadian border to the Gulf of Mexico, and from Florida to the state of Washington.



PHILLIPS PETROLEUM COMPANY

Bartlesville, Oklahoma

We Put the Power of Petroleum at America's Service



... Mark of PROGRESS in Railroading

Progress poses for its picture

THIS LINE-UP of four of Erie's diesel fleet gives you an idea of what has happened to a busy railroad whose key word is *progress*.

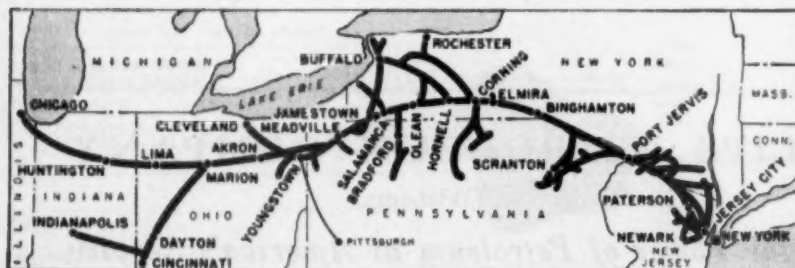
All Erie's freight and passenger trains between New York and Chicago are hauled completely by diesel power. Travelers benefit by the use of smooth diesel power. Shippers enjoy better on-time performance and improved service. All this helps

in the production and distribution of what you eat, wear and use.

Add it all up and you see why Erie's heavy investment in modern equipment benefits everybody. Here is progressive railroading in action—Erie's constant effort to provide the best in safe, dependable transportation. When you ship or travel you will find real help from your nearest Erie representative!

Erie Railroad

Serving the Heart of Industrial America



operate both ranches and farms. I also operate a factory and have my individual problems and expenses.

Emphasizing the farmer's problem as being any different from that of anybody else is wrong and leads to inaccurate thinking by the public and the politicians.

It is true that he has had subsidies to equalize his buying power, but this has been done at the expense of the public who have no such handouts.

The farmer has made more money than he has ever made, and I think it is unfair to emphasize a few items of expense which may have narrowed his margin of profit temporarily. He is not entitled to any more sympathy over his steel and petroleum prices than the rest of the buyers in the country.

You refer to the farmer as being hard-hit by drought in the Southwest, and pests in the Midwest. The drought has been over-emphasized for political reasons. It has existed for a long time without much comment, and Arizona which has continual drought is not even included in the relief funds. Arizona only has two congressmen and Texas has a good many. The proportion of the difficulty in the Southwest to the total of the farm business in the country is relatively small, and should not be urged as a national issue. . . .

F. N. BARD

BARRINGTON, ILL.

• The only reason we call the attention of our readers to the farm problem is that agriculture is an important part of our total economy. We do not endorse subsidies for the farm simply by writing about them. The farm question has both economic and political angles that we can scarcely overlook.

Community Drives in Canada

DEAR SIR:

Congratulations on your article in the July 25 issue (page 105) regarding executive leadership in Community Chest campaigns. No professional fundraisers can assure success of any such campaign on their own, no matter how able they may be. Success . . . depends chiefly on the leadership given by the top businessmen and . . . leaders of organized labor in the community.

We . . . sincerely appreciate the contributions made by such leaders, and the time which is involved.

. . . However . . . campaign chairmen could save themselves a great deal of effort if they would apply some of their own business principles to the job of organizing a campaign, e.g., advance planning, organization, teamwork, and delegation of authority. . . .

J. M. ANGUISH

THE COMMUNITY CHEST OF EDMONTON
EDMONTON, ALBERTA

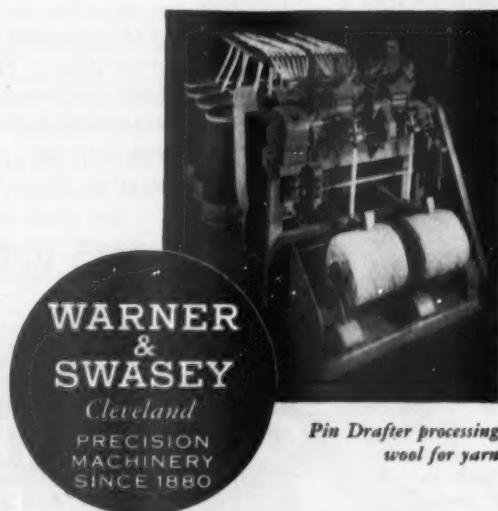
"Friendly" government vs. "selfish" business

THE GOVERNMENT will carry a letter for you from Texas, say, to New York for 3¢. But the government loses money on the trip, and you have to pay taxes to make up the difference.

Business carries a gallon of gasoline the same journey from Texas to New York for 1/5th of 3¢, does it almost as fast. It may not be door-to-door delivery, but it's a lot

harder to handle, in spite of which business makes a profit—and out of which it pays taxes to support government business ventures such as the post office.

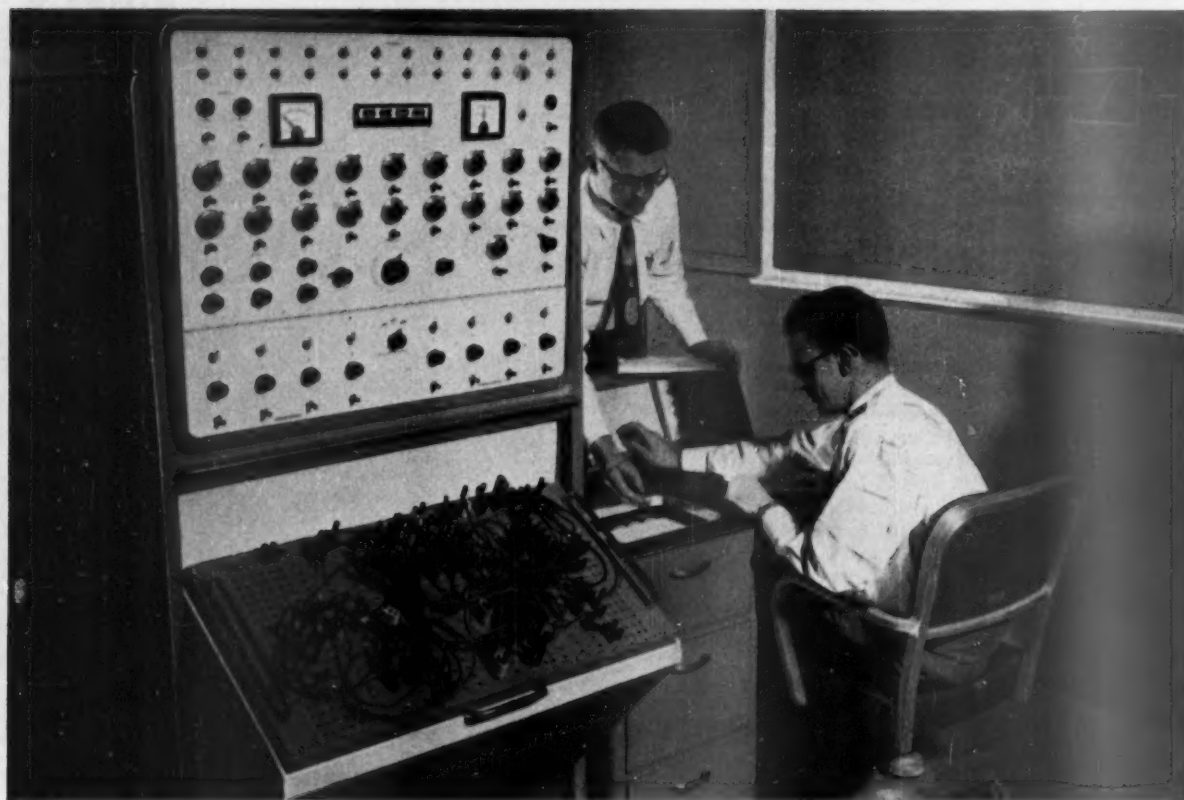
Since time began, the hope of private profit is what has stimulated the drive for efficiency and low costs, out of which everyone benefits. If that is business selfishness, the world needs more of it.



*Pin Drafter processing
wool for yarn*

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

BEST WAY TO GIVE YOUR HUNCH A CHANCE



ENGINEERING processes are undergoing a revolution, thanks to GEDA—the Goodyear Electronic Differential Analyzer—a compact analog computer which greatly accelerates the design of complicated equipment and systems.

A big advantage of GEDA is the fact that engineers do not have to learn specialized mathematics in order to use the computer. Once the block diagram is laid out, it is a simple matter to set it up on GEDA's problem board.

The results are shown graphically. Consequently, GEDA provides the engineer with a better understanding of the system under study because the solutions are produced in a form already familiar to him.

So now he is encouraged to "play his hunches." A

new idea can be tried out or a component of a system can be changed so easily that new approaches to a problem can at last be profitably explored. Even problems dealing with dynamic systems, where conventional solutions seem impossible or too time-consuming, can be solved by GEDA.

The GEDA line of equipment includes both linear and nonlinear analyzers, six-channel console recorders, and curve-followers—offering flexibility and scope to meet specific individual requirements.

WRITE FOR BROCHURE and details: Goodyear Aircraft Corporation, Dept. D-65B, Akron 15, Ohio—for over five years a major supplier of computing equipment, operator of one of the world's largest computer application laboratories.

SOLVE: *Analysis and synthesis of instrument servos including such unavoidable nonlinearities as static friction, gear backlash and saturation*
• *Design and process controls (as in paper mills and chemical plants)* • *Synthesis of automatic controls (as in autopilots, atomic reactors and jet engines)*
Design of suspension systems (bridges, automobiles, etc.) • *Diffusion problems—and countless others*

WITH GEDA



GEDA—T. M. Goodyear Aircraft Corporation, Akron 15, Ohio

only the heater used in

ifp 

PROVIDES ALL THESE

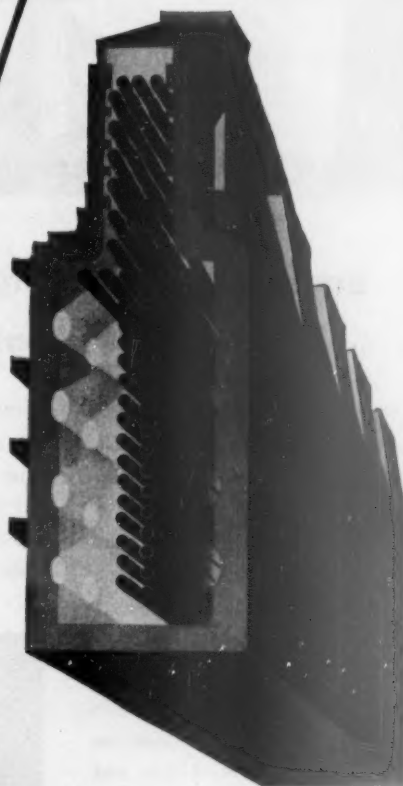
- Direct, controlled radiant heat along and around the horizontal heating tubes
- High, uniform rates of heat transfer
- Heat input to match any desired heating curve
- Low residence time at temperature, where desirable
- Complete combustion, with little or no excess air
- Positive heat rate control at either high or low temperature operation

Petroleum and petrochemical heaters, featured by performance as exemplified above, form a part of the over-all Sela activities in the *Improved Fluid Processing* of air, gas and liquids. Removal of water, oil and vapors from instrument or process air and the phase separation of liquids are functions of other Sela refinery apparatus.

IFP* is not a piece of equipment... nor simply a method. It is a combination of modern techniques and equipment, fitted to specific needs by engineers with refinery operation backgrounds.

A letter will bring you full details.

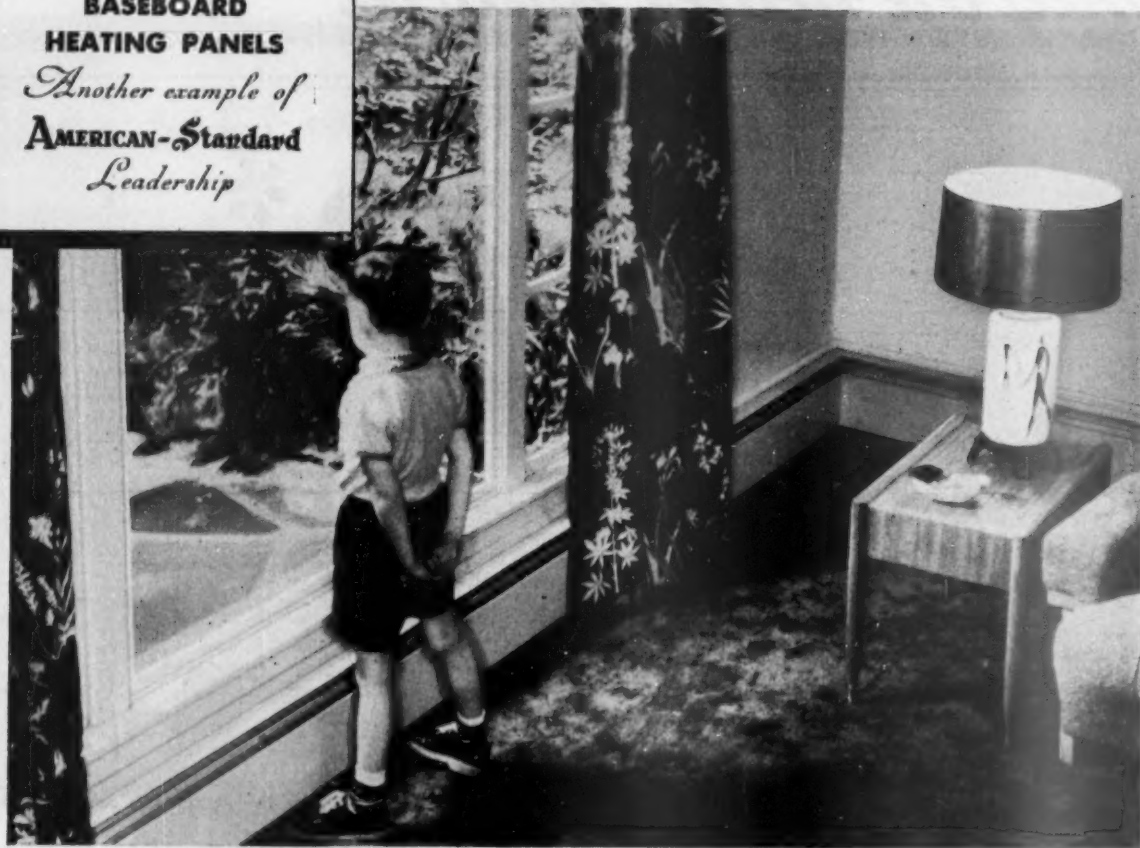
****Improved Fluid Processing***



SELAS

CORPORATION OF AMERICA
PHILADELPHIA 34, PENNSYLVANIA
Development • Design • Manufacture

**BASEBOARD
HEATING PANELS**
*Another example of
AMERICAN-Standard
Leadership*



**Baseboard heating provides superior comfort...
saves valuable wall and floor space**

• Modern, attractive American-Standard baseboard heating panels provide you with comfortable, even warmth from floor to ceiling, wall to wall. Taking the place of regular wood baseboards, the panels save floor space, leave walls unbroken... allow greater freedom of decorating. They are ideal for use under picture windows, and are a boon to such premium-space installations as hospitals, motels, hotels and offices, as well as residences.

Both for new construction and modernization, baseboard panels provide all the comfort and efficiency of hot water heating in its most modern form. And the complete line of such products developed by

American-Standard is further evidence of our continued efforts to create quality products that will enhance the value of today's buildings and add to their comfort and convenience through the years.

AMERICAN-Standard



American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SONDHEIM AIR CONDITIONERS

BUSINESS OUTLOOK

BUSINESS WEEK

AUG. 22, 1953



Fall is in the air. And, with it—for the first time since 1939—comes a return to seasonal patterns in the auto industry.

This means an autumn decline in sales and output.

However, even now, the pattern isn't truly normal. There's a big dent in auto output resulting from the General Motors fire (page 28).

Auto production now, and for some time to come, will pull the business curve down a little. But Detroit, in its characteristic way, will surmount its new troubles better than might be expected.

And remember: This isn't the much-talked-of business "easing."

Business, over-all, still is very healthy. Autos may give the output curve a premature down-tilt but, for now, it isn't significant.

Weekly production of new cars might be cut by something over 20,000 units (or about 15%) if all the models heretofore equipped with Hydra-Matic transmissions were to be shut off at once.

Some output already is being lost, of course. But makers had some transmissions in stock; some will limp along, if sales warrant, substituting manual transmissions for automatic.

And quite a few of the sales lost by the hardest-hit plants will be picked up gleefully by competitors.

Industry probably will learn a number of things from the GM fire—notably, not to put too much of any operation under a single roof, no matter how "fireproof" the whole thing may seem to be.

Fire prevention and fire retards will get a lot of study, too.

Production of the four volume leaders—Chevrolet, Ford, Plymouth, and Buick (in the order named)—won't be affected by the fire.

Fifth- and sixth-place Pontiac and Oldsmobile will be. Olds has been turning out very few cars with manual shifts, while Pontiac's Hydra-Matics made up perhaps 85% of its output.

Then you come to Mercury, Studebaker, Dodge, and Chrysler (running in that order in July), none of which is affected.

Nash, ranking ninth for the half year, is out of the race for now.

Some of the recently laggard independent auto makers—as well as the volume leaders—may snag some sales at the expense of Olds and Pontiac. Chrysler and Packard salesmen will try to woo Cadillac customers, but their chances are problematical.

Steel makers already feel the disruption in autos—more, perhaps, than the facts of the case will warrant in the long run.

Steel needs of the limping car makers and their suppliers, naturally, have dropped. However, this has resulted more in requests for slower deliveries than in actual cancellations on steel orders.

Other car makers will gladly "borrow" steel if it's available.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

AUG. 22, 1953

Changes in steel demand now, as it happens, catch the mills at a sensitive time. Order books for the fourth quarter haven't filled so rapidly as some observers had expected.

Inventories are better, demand less frantic (BW-Aug. 8'53, p31).

Iron Age reports this week that steel buyers are "getting ready to climb back in the driver's seat."

And Steel magazine says an easing in hot-rolled carbon bars (the most widely used form of steel) may herald a more general balance.

Steel output hasn't been at capacity for weeks now. (This week's rate is put officially at about 96%.)

You can blame this on hot weather if you wish. But it more likely is due to just a little less insistence on the demand side.

Steel's "seasonal" summertime dip didn't occur in peak years.

And here's a telltale: The price of steelmaking scrap, which often foretells the course of operations, is sagging again.

Operations in the steel industry probably aren't going to take a tumble this week or next.

But when it comes, (1) it will come with a whoosh that will surprise a lot of people, and (2) the drop will be unreasonably deep (as fabricators live off inventories and dicker for price concessions).

Shipments of copper to fabricators were lower in July than they had been for many months. But that's deceptive:

Metal users always shut down widely in July for vacations.

Actually, copper still is fighting off that long-predicted buyers' market; one custom smelter at midweek marked the price up $1\frac{1}{2}$ ¢ a lb.

Of course, when steel operations take their dip, use of copper will fall off, too. By then, these and many other industrial raw materials will be in the grip of an inventory retrenchment, but that's a bridge you don't have to cross just yet.

Inventory adjustments undoubtedly are showing up in a few spots.

You see isolated examples in metalworking trades—layoffs or even shutdowns for a week or two. (Many, so far, are blamed on slack in tractors and farm implements; one such was the layoff of several hundred in Springfield, Mass., by American Bosch this week.)

Over-all, the Dept. of Labor reports somewhat better availability of workers in a few areas.

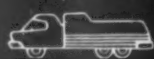
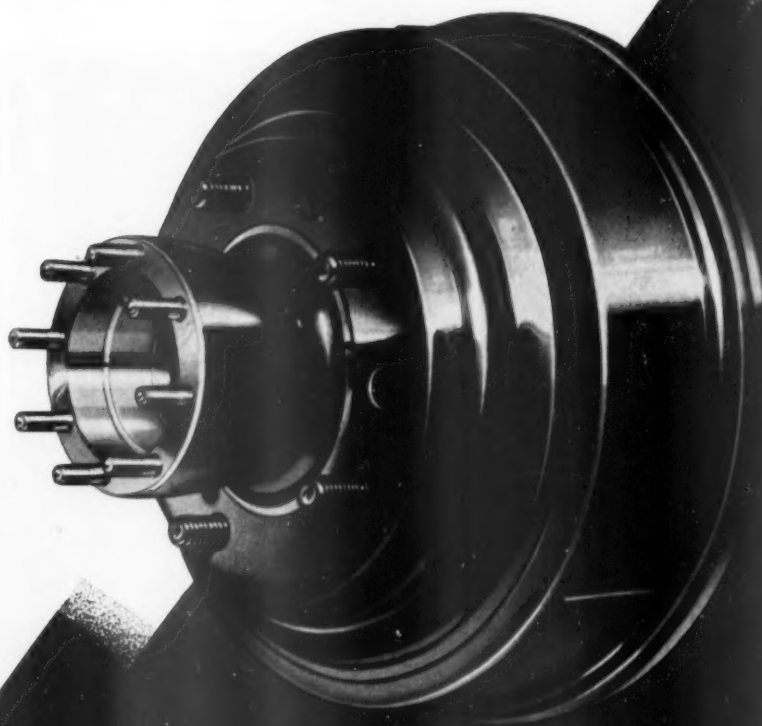
Nevertheless, the number of workers drawing unemployment compensation is a scant 900,000, and new applications are declining.

Worries over the outlook for construction were eased this week when F. W. Dodge Corp. reported a jump to \$1.8-billion in July contract awards in 37 eastern states (up from \$1.1-billion in June).

In addition to reversing a downtrend, July set a 1953 high.

Contracts for commercial building and for educational and scientific structures stood out. But residential awards picked up, too.

KELSEY-HAYES



Wheels, Brakes, Hubs and Drums . . . also Parts for Farm Implements and Aircraft

KELSEY-HAYES WHEEL COMPANY

DETROIT 32, MICHIGAN

**PLANTS IN DETROIT AND JACKSON, MICHIGAN, McKEESPORT, PA.;
LOS ANGELES, CALIF., DAVENPORT, IOWA, WINDSOR, ONTARIO, CANADA**



How One Machine All These Things



Machinery and Equipment to Help People

For Your Country's
Security and Your Own—
BUY U. S.
DEFENSE BONDS NOW

ALLIS-CH

GENERAL MACHINERY DIVISION

PICTURED HERE are examples of the many products—so vital to good living—that come into being as a result of the recovery of metals and minerals from native ores.

The Allis-Chalmers grinding mill, at left, is one of the most important machines processing these vital resources. Behind its design and construction is Allis-Chalmers 100 years of experience in developing techniques of recovering metals from the earth.

The job of this mill is to reduce the already crushed and screened ore to fine particles, so that pure, usable metal can be extracted easily and economically.

This machine is part of the Allis-Chalmers team of crushing, screening and processing equipment that prepares every kind of ore (iron, copper, aluminum, lead, zinc and others) for industrial use.

Like other members of the team, these grinding mills have helped solve unusual production and recovery problems. For example, special Allis-Chalmers equipment is helping to make practical the production of iron and steel from great U. S. reserves of Taconite—a plentiful but hitherto undeveloped source of iron.

This readiness to meet a new challenge is one of the reasons why Allis-Chalmers is a leader in mining and rock products machinery—machinery for producing America's wealth of metals and minerals on which our good living depends.

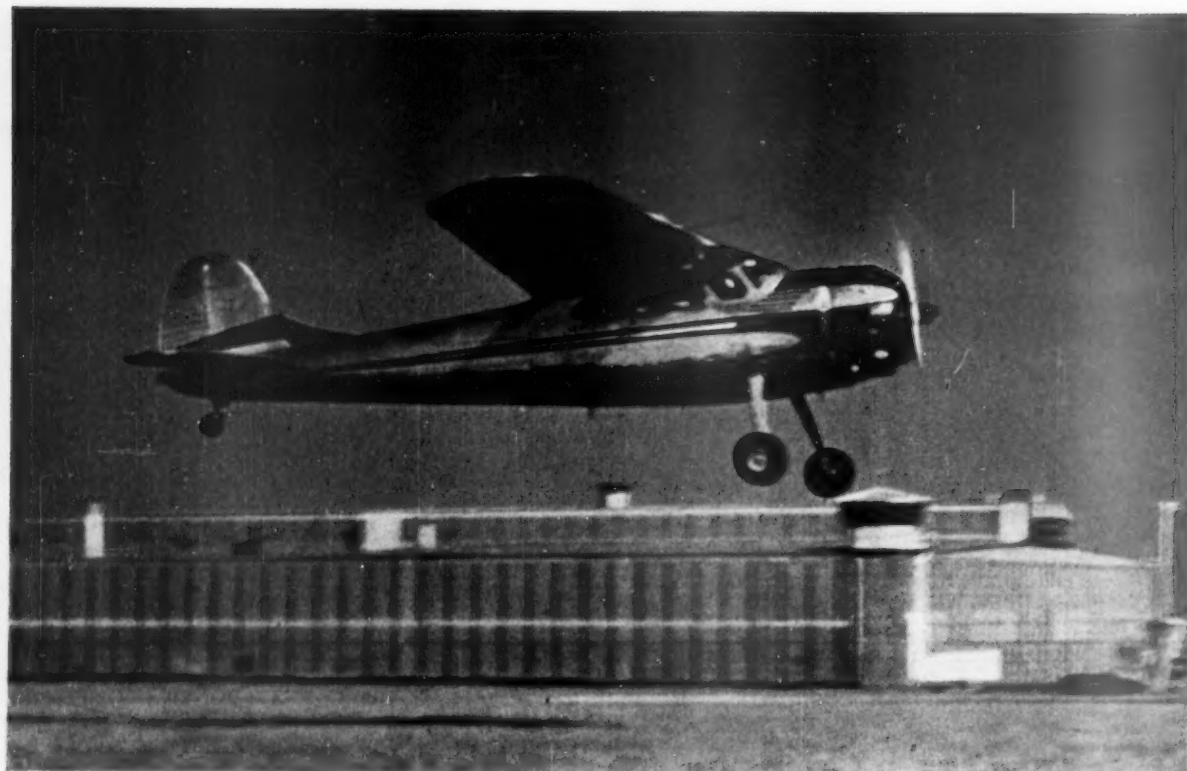
This readiness to meet a new challenge is one of the reasons why Allis-Chalmers is a leader in mining and rock products machinery—machinery for producing America's wealth of metals and minerals on which our good living depends.

ALMERS



C.5632A

PLANTS IN: MILWAUKEE, WIS.—PITTSBURGH, PA.—NORWOOD, OHIO—BOSTON, MASS.—TERRE HAUTE, IND.—MONTREAL, P. Q.—ST. THOMAS, ONT.



OFFICE IN THE SKY for businessmen in a hurry is this handsome 5-place *Businessliner* executive plane built by Cessna Aircraft Company, Wichita, Kansas.

Executive suite for men on the way up

Getting where they want to go on time saves money for executives flying Cessna's popular *Businessliner*.

It's powered by a rugged 300-hp engine made by Barium's Jacobs Aircraft Engine Company, Pottstown, Pa., a 25-year veteran in the airplane business. Jacobs also turns out precision gears and hydraulic assemblies for jet fighters, and is working on a radically new convertiplane (winged helicopter) slated to reach a top speed of 185-190 mph.

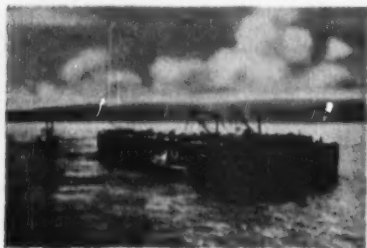
3.2A

Assignments like these more than justify the emphasis which Jacobs, like all Barium companies, places on top-flight engineering. For Barium believes you've got to have good design if you want good products.

Creative engineering is never in short supply at Barium, for its engineering resources are as varied as its products. Like to have this notable engineering talent focused on *your* problem? Write Barium Steel Corporation, 25 Broad St., New York 4, N. Y.



BAYONNE BOLT CORP. • CENTRAL IRON AND STEEL COMPANY • CHESTER BLAST FURNACE, INC. • CLYDE IRON WORKS, INC. • CUYAHOGA SPRING COMPANY • EAST COAST AERONAUTICS, INC. • ERIE BOLT AND NUT COMPANY • GEOMETRIC STAMPING CO. • GLOBE FORGE, INCORPORATED • INDUSTRIAL FORGE & STEEL, INC. • JACOBS AIRCRAFT ENGINE CO. • KERMATH MANUFACTURING CO. • KERMATH LIMITED (CANADA) • PHOENIX BRIDGE CO. • PHOENIX IRON & STEEL CO. WILEY MANUFACTURING CO.



DOWN THE SUSQUEHANNA en route to James McWilliams Blue Line, Inc., N. Y., goes a new 20,000-barrel steel tanker barge made by Barium's Wiley Manufacturing Company, Port Deposit, Maryland.

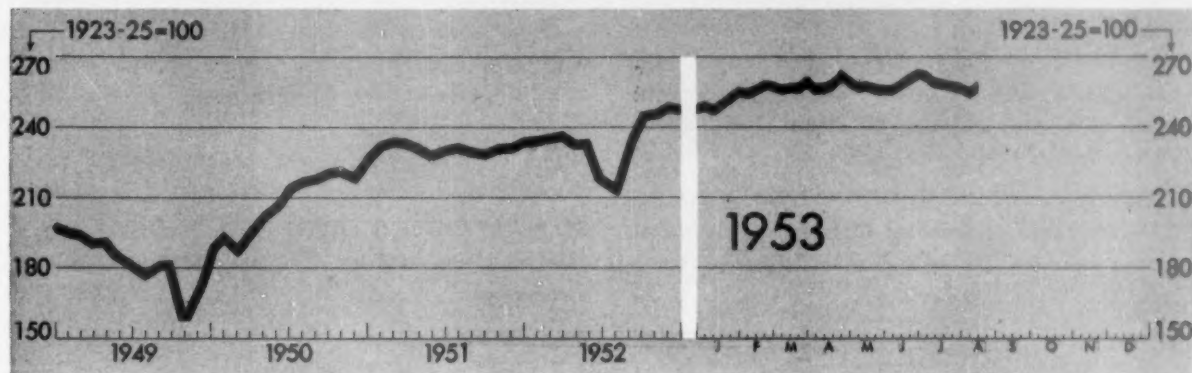


SHOULDERING THE LOAD at Oregon's new McNary Dam on the Columbia River 190 miles east of Portland is this husky 70-ton Whirley crane made by Barium's Clyde Iron Works, Dyluth, Minnesota.



NEW MAGNESIUM WINGS for Lockheed's F-80 jet, now under service flight test. Designed by Barium's East Coast Aeronautics, Inc., Pelham Manor, N. Y., they have fewer parts, carry more fuel.

FIGURES OF THE WEEK



Business Week Index (above) *258.9 †256.6 258.8 232.0 173.1

PRODUCTION

Steel ingot production (thousands of tons).....	2,170	†2,146	2,128	2,017	1,281
Production of automobiles and trucks.....	155,179	†137,671	175,555	36,890	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$49,765	\$49,534	\$41,979	\$124,512	\$17,083
Electric power output (millions of kilowatt-hours).....	8,514	8,464	8,209	7,627	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,595	6,538	6,551	6,278	4,751
Bituminous coal production (daily average, thousands of tons).....	1,565	†1,542	1,329	1,590	1,745

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	74	74	75	72	82
Carloadings: all other (daily av., thousands of cars).....	57	58	60	58	53
Department store sales (change from same week of preceding year).....	+2%	-1%	+11%	+2%	+30%
Business failures (Dun and Bradstreet, number).....	150	195	148	141	217

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	420.6	415.9	426.5	435.8	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	85.7	85.3	85.9	97.1	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	92.9	91.4	92.0	94.3	††75.4
Finished steel, index (U. S. BLS, 1947-49 = 100).....	141.7	141.7	141.7	130.8	††76.4
Scrap steel composite (Iron Age, ton).....	\$43.17	\$44.42	\$44.83	**\$42.00	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	29.790¢	29.935¢	29.975¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.12	\$2.22	\$2.07	\$2.32	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	32.85¢	33.04¢	33.43¢	39.26¢	30.56¢
Wool tops (Boston, lb.).....	\$2.12	\$2.12	\$2.12	\$2.10	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	194.9	196.7	192.3	198.9	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.85%	3.84%	3.86%	3.51%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2½%	2½%	2½%	2½-2½%	1-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	53,189	53,177	52,643	52,544	††45,820
Total loans and investments, reporting member banks.....	79,814	79,870	80,048	76,534	††72,036
Commercial and agricultural loans, reporting member banks.....	22,912	22,799	22,651	20,900	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	32,333	32,536	33,326	32,951	††49,879
Total federal reserve credit outstanding.....	26,352	26,153	25,923	24,553	23,883

MONTHLY FIGURES OF THE WEEK

MONTHLY FIGURES OF THE WEEK				
	Latest Month	Preceding Month	Year Ago	1946 Average
Bank debits (in millions)	July	\$148,135	\$154,106	\$137,334 ††\$85,577

* Preliminary, week ended August 15, 1953.

† Revised.

‡ Date for "Latest Week" on each series on request.

** Basing pt., less broker's fee.

†† Estimate.

in BUSINESS this WEEK...

GENERAL BUSINESS:

SECOND-ROUND CUTS ARE HARDER. Eisenhower's budget-trimmers are sweating them out now; by yearend industry will begin to feel where they're going to hit.p. 27

A FIRE THAT CHANGED THE COURSE OF AN INDUSTRY. Loss of General Motors' Livonia plant means there will be fewer cars this year, big sales lossp. 28

FRANCE: WAITING FOR A CHANGE. The West

watches anxiously as strike wave based on "state of mind" threatens Fourth Republic.p. 30

ROUTING TRAINS BY DIAL, 50 AN HOUR. Rock Island RR tries out a new dial-control system for a complicated intersection.p. 32

STEPPING INTO STEEL HOMES. United States Steel prepares new try at selling them to private ownersp. 34

Business Briefsp. 36

BUSINESS ABROAD:

CHINA TRADE TEMPTS JAPAN AGAIN. Strong groups in Tokyo claim Korean truce removes political ban on dealing with Reds.p. 100

CAPITAL FOR THE COMMON-WEALTH. Semipublic body will promote dollar-earning investments in undeveloped sterling lands.p. 102

GERMANS SELL INDIA A STEEL MILL. Krupp and Demag snag contract to build a \$150-million mill to boost India's output.p. 104

Business Abroad Briefs.p. 105

COMMODITIES:

CYCLES: CATTLE ARE ON THE CREST. Beef has always been a fluctuating commodity, and there are plenty of reasons why.p. 82

ALCOA-ALCAN TIE IN COURT. U. S. uses the case to reopen issues with the industryp. 88

Commodities Briefsp. 91

FINANCE:

HIGH TAXES—A CUSHION, BUT HOW SOFT? Wall Streeters add up the benefits expected from the end of EPT next January.p. 72

"FRINGE" AID FOR SMALL FIRMS. Mutual Life has a new employee benefit plan for smaller companies to help them hold workers.p. 78

Finance Briefsp. 80

LABOR:

WHY THE CARPENTERS' UNION IS TOUGH. An old craft union finds itself out of the AFL—and with a lot of problems.p. 108

BUDGET CUT at Labor Dept. will

	Page
Business Outlook	17
Washington Outlook	39
International Outlook	97
Personal Business	119
The Trend	136
Figures of the Week.....	23
Local Business	92
Readers Report	8

hit hardest at administration of wage-hour laws, state employment agenciesp. 111

A QUICK APPRAISAL OF THE LABOR MARKET: the second quarterp. 112

PENSIONERS UNION KEEPS GROWING. Year-old Retired Autoworkers Organization in Detroit picks up steamp. 113

Labor Briefsp. 114

MANAGEMENT:

DO TOP MEN NEED AIDES? Managerial opinion is split over the desirability of using executive assistantsp. 122

GUESSING RIGHT ON COSTS. Companies expect the military will be tougher on costs: They need dependable estimates. Convair has a system to produce them.p. 128

HELPING EXECUTIVES REMEMBER. More and more companies are trying reading and memory courses.p. 132

Management Briefsp. 135

MARKETING:

BUILDING A SALES FORCE FROM SCRATCH. Carpet maker C. S. Mas-

land finds out what happens when you drop your national distributor and take over yourself.p. 58

ARMY PX'S WIN A ROUND. House committee blocks retailers' jab, but they land other blows.p. 61

Marketing Briefsp. 62

THE MARKETS:

TRADERS ASK: WHERE IS IT? This year is breaking the pattern of summer upturns, and bulls are getting fewer and fewer.p. 106

TABLE: 1953 SUMMER RALLY—BOX SCORE TO DATE.p. 107

PRODUCTION:

SETTING UP STANDBY FACILITIES. Ordnance comes up with a program for keeping defense tools in shape for emergencyp. 43

WHY DESIGNERS GO FOR MODELS. Scale models make it easier for engineers to visualize complex plants and get rid of bugs.p. 47

FLUID COKING may provide more gasoline and diesel fuel—but don't look for lower prices.p. 48

Production Briefsp. 52

NEW PRODUCTSp. 54

New Products Briefs.p. 55

RESEARCH:

CUTBACKS, BIGGER CIVILIAN ROLE. Government research outlays have hit their peak; the new trend is to civilian control.p. 64

SELF-SERVICE FOR SCIENTISTS. At San Diego Navy lab, researchers can browse around in quest of parts they needp. 66

Research Briefsp. 71



Vapor-from-paper stops rust of pump parts headed for Palmira

Saves greasing—saves degreasing!

The white paper you see there gives off a vapor that stops rust.

It's *clean* and so *EASY* to use that Byron Jackson Co. now protects this part for big oil line pumps in 14 minutes. It took 50 minutes with messy preservatives! And you can see that no bulky equipment is needed that would hog floor space.

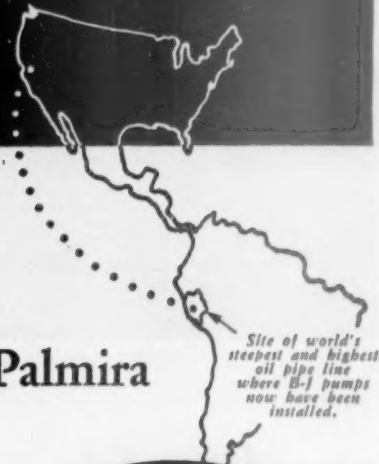
But *how good* is vapor at stopping rust? Well, recently some B-J pumps were sent to Palmira, Ecuador, near the

equator. Even with salt air and high humidity, they arrived bright and *clean*!

This was no surprise to the maker. He has used Angier's vapor rust preventive since '49. That four years' experience with our VPI* Wrap reveals impressive savings. Savings in time and materials that VPI users in every branch of metal-working already know about.

For facts on *how VPI works* and *what it can save YOU*, mail coupon now.

*Ⓢ Vapor rust preventive. Angier VPI Wrap (2 gram) is made to conform to the government's specification on volatile rust inhibitors.



Protective Papers for Industrial and Building Needs — Since 1895

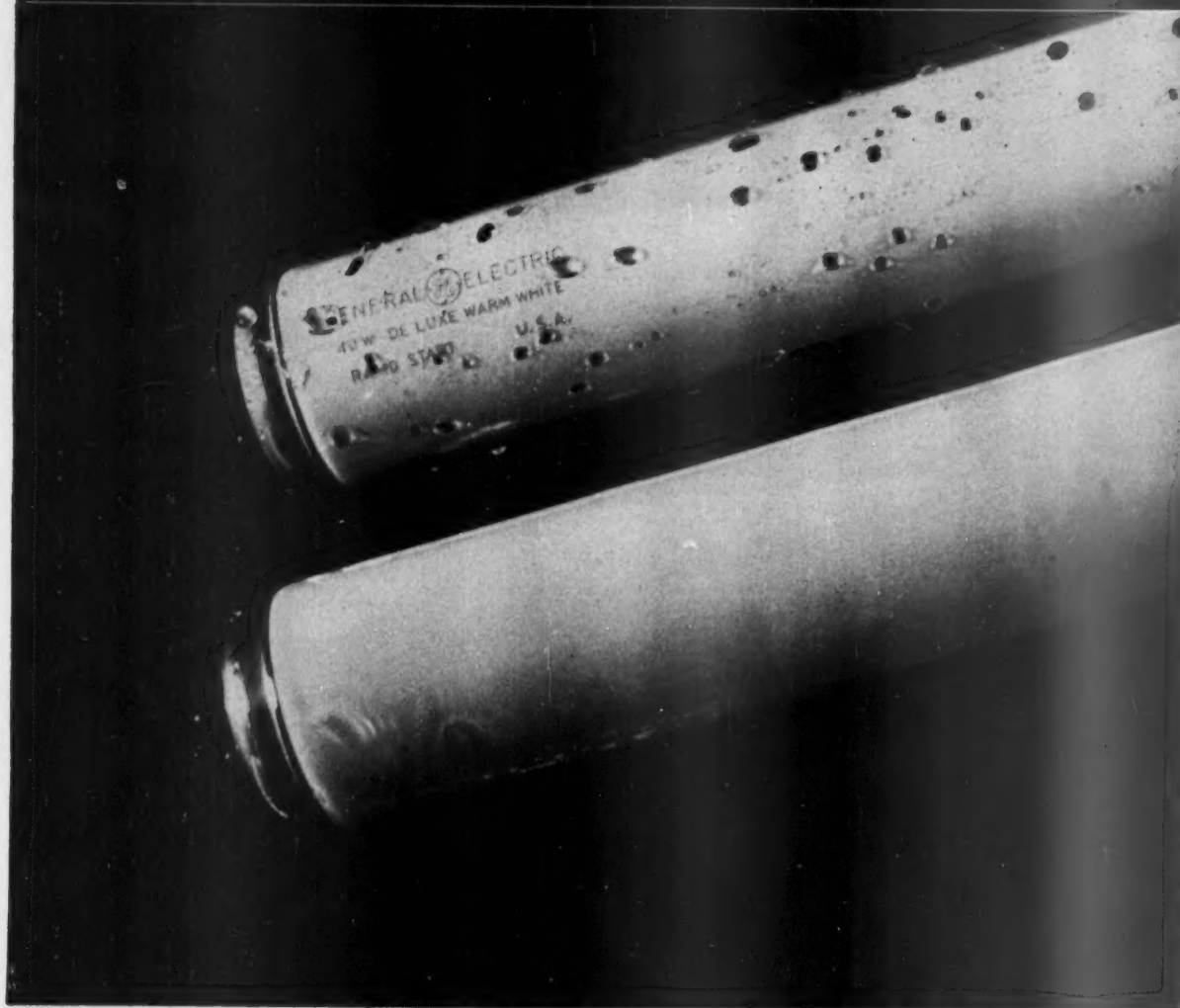
Angier Corporation, Framingham 7, Mass.
Send facts on Angier VPI Wrap as applied to:

- | | |
|---|--|
| <input type="checkbox"/> Machinery-Industrial, Farm, Office, etc. | <input type="checkbox"/> Electrical Machinery, Appliances. |
| <input type="checkbox"/> Transportation Equipment. | <input type="checkbox"/> Fabricated Products. |
| <input type="checkbox"/> Steel in process. | <input type="checkbox"/> Ordnance Equipment. |
| <input type="checkbox"/> Instruments, clocks. | <input type="checkbox"/> Other. |

Sign below and clip to letterhead.

Does *your* management know about VPI?

You expect the best value from G-E fluorescent lamps



**Silicone coat on new G-E
Rapid Start lamps helps
them start quicker**

Moisture in the air can make a fluorescent lamp slow to start. The wet film that condenses on the lamp is a good enough conductor to detour some of the electricity needed for proper starting.

General Electric has tailored a "rain-coat" that stops this. It's made of silicone and breaks up the wet film into tiny droplets, leaving dry areas that interrupt the electrical contact. Less current is stolen. Starting is quicker, surer.

We call the coating Dri-Film*. The photo above shows the difference it makes. Moisture breaks up into drop-

lets on the Dri-Film* lamp, forms a smooth coating on the ordinary lamp.

You get Dri-Film* on G-E Rapid Start lamps. It's invisible, won't rub off, helps assure you all the light you pay for. Many leading manufacturers have designed lighting fixtures to use Rapid Start lamps and their special Rapid Start ballasts. You *expect* the best value from G-E fluorescent lamps. Here's another reason you can.

For more information, write General Electric, Department 166-BW-8, Nela Park, Cleveland 12, Ohio.

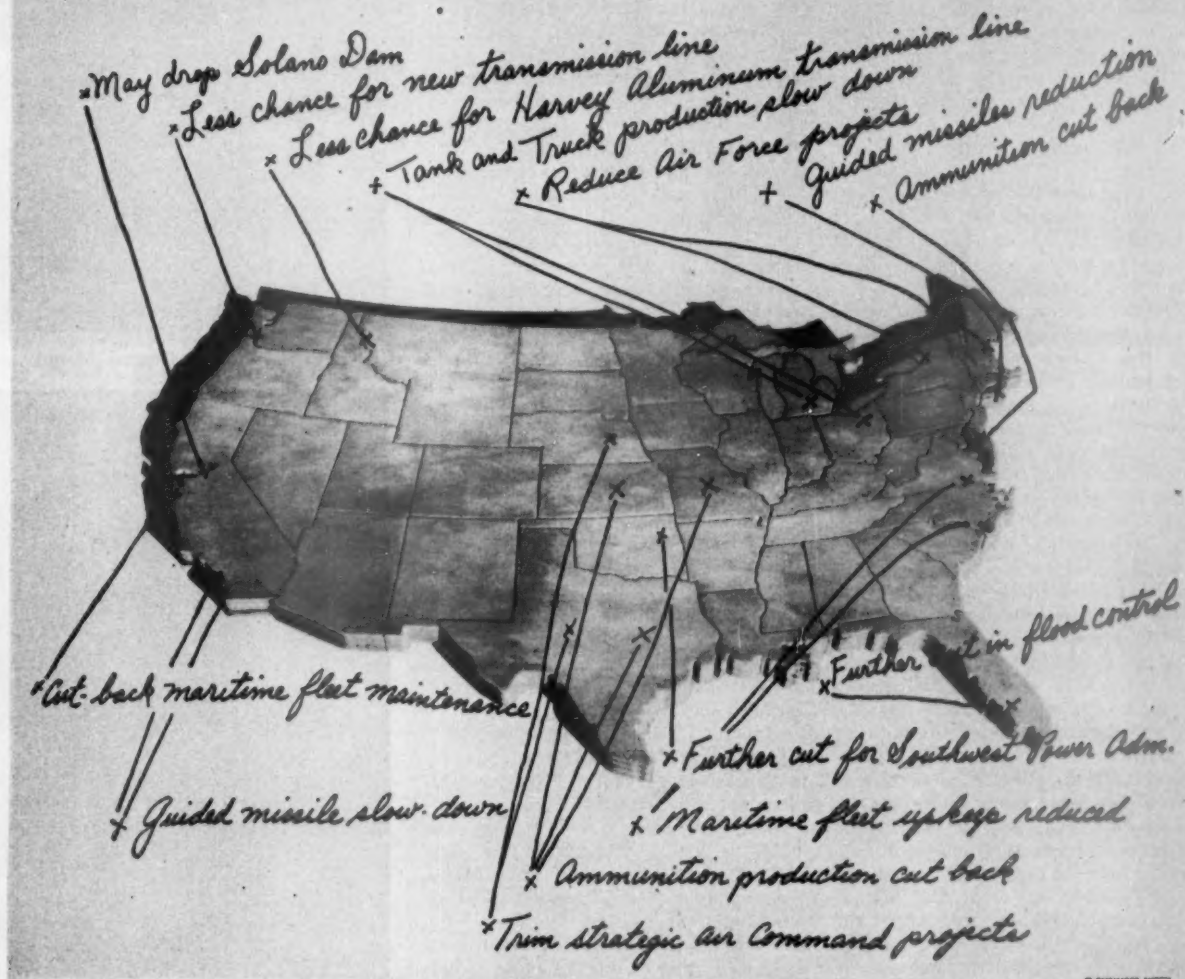
*Reg. U. S. Pat. Off.

You can put your confidence in—

GENERAL  ELECTRIC

Where the Next Round of Budget-Cutting Will Hit

A Sampling:



Second-round Cuts Are Harder

President Eisenhower's budget-cutters are feeling their first real pain since taking over the government last January. Before the year is over business will get a taste of what they're feeling now, as the map suggests.

Neither the budget-cutters nor business felt anything more than a twinge or two as the new administrators happily snipped some \$4.5-billion from Harry S. Truman's spending program for the fiscal year that began July 1.

Big slices fell off the budget easily at first—except for a little trouble from congressional free-spenders, and a few protests from businesses that were losing orders.

"It was fun to cut Truman's budget," one businessman-turned-bureaucrat explained this week. "But now we have to cut our own figures—and that hurts."

• **Clamping Down**—Budget Director Joseph M. Dodge is turning the screws for another round of cuts—which he

says must reach at least another \$4.5-billion.

He's talking tough for these reasons:

(1) He knows the Administration has only a slim chance of balancing the budget in fiscal 1955, which begins next July 1. That's because the deficit inherited from Truman, plus tax reductions already promised, are bigger than all the cuts in spending now foreseen. To keep any hope of balancing alive, Dodge issued explicit orders:

A second cut of \$4.5-billion must show up in the spending requests departments will lay on his desk Sept. 15, covering plans for fiscal 1955.

(2) Every dollar trimmed now out of spending plans for fiscal 1955 will increase the Administration's chances of staying under the \$275-billion debt ceiling. Dodge ordered departments and agencies to start tapering off spending right away, so the transition into fiscal 1955 will be a gradual decline rather than a sharp bump next year. That's good budget management, as Dodge sees it. And it also relieves some of the pressure on the debt ceiling—now just \$2.8-billion above the existing debt.

All this means that from now on, spending will feel a heavier hand than at any time since Eisenhower took over.

• **Below the Bottom**—It's a case of administrators combing back through figures that only a few weeks ago they called rock-bottom.

Protests are rising from some of the civilian departments, but most of them took the Dodge instructions at face value and are hunting for the necessary reductions.

In the Pentagon—where eventually the biggest cuts will have to come—officials argue that they can't conform to the Dodge instructions until the new Joint Chiefs of Staff come up with some recommendations. The Defense Dept. hopes to avoid a spending showdown until later in the fall.

• **How It Looks**—Business is going to feel the effects pretty much across the board, with construction getting the first—and perhaps the sharpest—rap over the next 12 months. Here's how the cuts are beginning to shape up, industry by industry:

Construction. Reclamation Bureau officials say reductions are going to come hard, chiefly because projects are already moving ahead at the most economical rate—in accordance with the Dodge order. They argue that a slowdown would cost more money in the long run. And they have only one new project they can halt. That is the Solano project in California—for which Congress approved \$7.6-million this year. It's under review now.

Army Engineers' river and harbor work has been cut, too, as far as new projects are concerned. They got less than \$4-million worth approved by Congress. They have halted plans to advertise for bids until the Secretary of the Army passes down a decision. Involved are \$800,000 for ship channels in New York harbor; \$349,000 for the Gowanus Creek in Brooklyn; \$700,000 for Norfolk (Va.) Harbor; \$610,000 for jetties in Canaveral Harbor, Fla.; and \$487,000 for South Galveston Bay, Tex.

Military construction is likely to

wind up with another reduction, on top of the one taken in the current budget. Strategic Air Command projects seem particularly likely to be pruned.

Ammunition. Immediate cuts really stem from the truce in Korea, but the budget directive from Dodge may speed them along. Further ammunition cutbacks may develop when the new Joint Chiefs make their first recommendations. A lot will depend on how stable they think the truce is going to be. •

Military hard goods. Makers of tanks expect another round of reductions. So should suppliers of autos, trucks, spare parts, tires, and batteries. The military says no plane cutback is likely as the result either of the truce, or of the Dodge budget instructions.

Military soft goods. There will be some trimming of orders for food, clothing, and personal accessories for troops. This will be slight at first, mostly geared to the new situation in Korea. It will gather steam next year as Defense Secretary Wilson puts into effect his plans to reduce draft calls.

Electronics. Pentagon observers think some trimming of the guided missiles program may result from the Dodge order. Experimental firing will probably continue, but plans to expand production may be curtailed.

Shipping. In the Commerce Dept.—where some of the most zealous budget-cutters are located—particular attention is being given to \$55-million in subsidies now going to about a dozen operators of shipping lines. Secretary Weeks may also recommend a lesser amount than usual for subsidies to shipbuilders.

Aviation. Commerce Dept. funds for airports seem likely to feel the pinch, if Weeks can get reduced recommendations through Congress.

Machine Tools. The Dodge order is likely to be seized on by Wilson as a clincher in his argument with ODM over its plan for a standby pool of machine tools.

ODM is in favor of the pool, and suggested that Congress vote \$500-million for it. Wilson was cool in his testimony before Congress, which trimmed the request to \$250-million. Now Wilson has good reason to renew his opposition, with the Dodge economy order as his big talking point.

Mining. Defense officials still have \$2.1-billion borrowing authority that could be used to expand production of scarce minerals. The nickel, aluminum, titanium, and cobalt goals have never been met. But chances are good that nothing further will be done about stepping up these programs—particularly as long as any borrowing would imperil the debt ceiling. Stockpile holdings of minerals are only 78% of goals, and aren't likely to be increased.

FIRE blasted through General Motors' giant

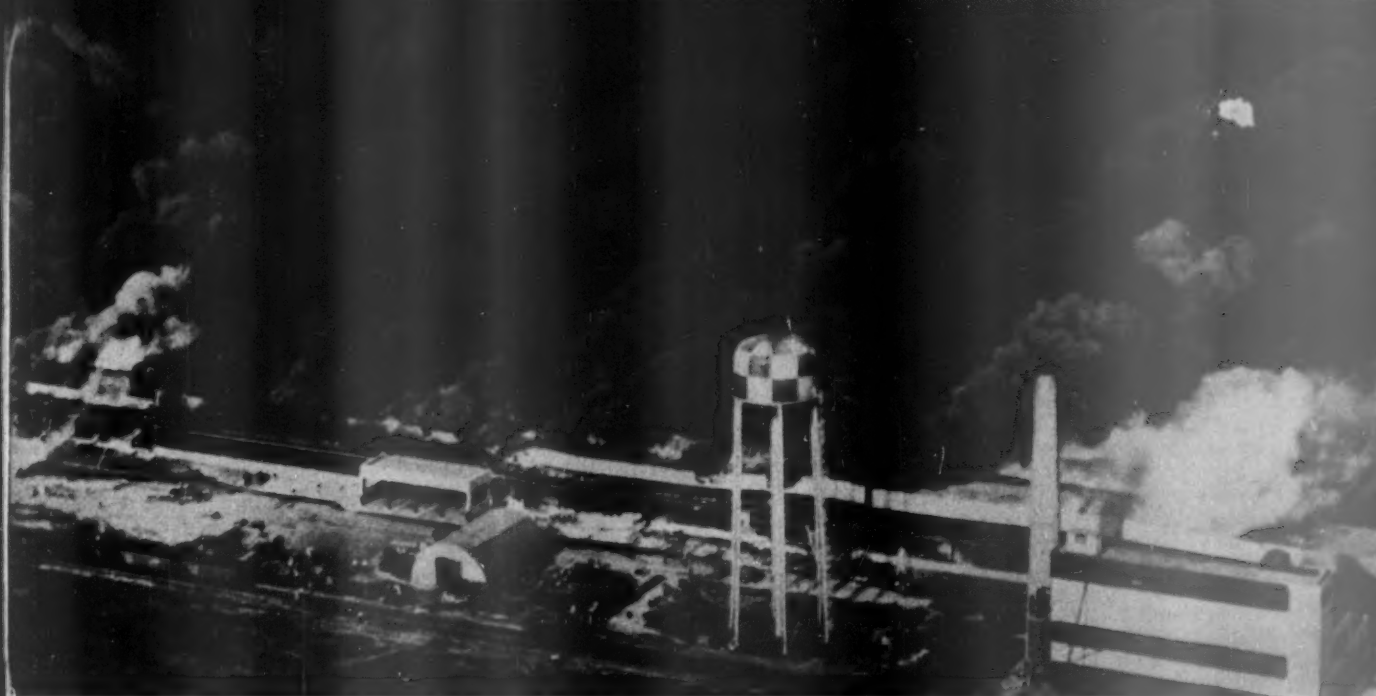


WRECKAGE: Steel beams buckled; roof sec-

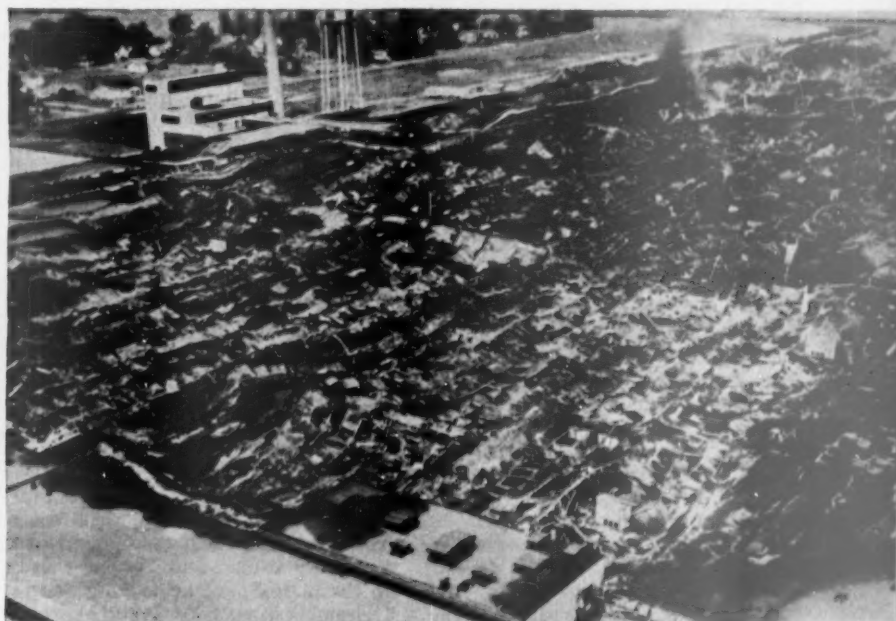
A Fire That

It happened one afternoon last week. Somewhere in General Motors Corp.'s giant transmission plant at Livonia, on the outskirts of Detroit, a spark dropped into a pan of inflammable cleanser. Flames jumped to an oil-soaked conveyor chain, from there to the roof. Before long, the whole 14-million-sq. ft. plant was ablaze. It burned to the ground.

As fire marshals and reporters sur-



plant in Livonia, a Detroit suburb, last week. Thus, the only source of widely used Hydra-Matic transmissions was reduced to . . .



tions crashed onto costly machines. The . . . RESULTS were a gutted plant, complete stoppage of Hydra-Matic output. It was . . .

Changed the Course of an Industry

veyed the smoking ruins, they estimated damage all the way from \$40-million to \$70-million. Most of that is covered by insurance. But, unluckily for GM and some of the companies it deals with, there are far heavier losses to come.

The Livonia plant had been the sole source of Hydra-Matic automobile transmissions—which are used not only in cars of GM's own division, but in cars

of other manufacturers as well. As a result of the Livonia production stoppage, the industry may turn out 300,000 fewer cars in this model year than it had planned. The loss: about \$750-million of sales.

For companies and GM divisions not using Hydra-Matic transmission, this tremendous drop in output will mean a boost in competitive standing. For dealers, it'll mean fewer cars to

sell and an end to the 1953 ogre of oversupply. For the car buyer, it will probably mean a lower trade-in allowance. The fire at Livonia has changed the course of the entire automobile industry.

• **Post Mortem**—How could a modern steel, brick, and glass building burn so quickly and completely?

You can lay much of the blame to oil. A modern metalworking plant

swims in it. It's on the machines, on the manufactured products, on the metal chips that pile up on the floor. In the Livonia plant, even some of the wood block flooring had soaked up oil, both from machines and manufactured parts.

Fire officials put some of the blame elsewhere. They charge that the plant wasn't adequately protected. Coverage by automatic sprinklers, they claim, was limited to only 15% of the plant. GM replies that the structure was built in conformance with all regulations, and was as well protected as "90% of industrial plants."

• **Holocaust**—Be that as it may, the fire exploded through the building with frightening speed. The spark that touched it off was probably from a welding torch. The fuse was a pan of oleum, a fluid used to clean and preserve automotive parts prior to shipment.

Once along the oily conveyor chain and up to the roof, the flames ignited pitch. The heat soon became so intense that steel beams and window casings turned red hot and buckled. Building supports collapsed, bringing huge sections of roof crashing to the floor. The fire was completely out of control.

Workers raced out of the plant with less trouble than might have been expected. At midweek, the death toll stood at six—three plant employees, one fireman, and two clean-up workmen who were killed when their crane brushed a high-tension wire in the wreckage.

• **Comeback**—GM at first had no clear idea of when it could get back into production. There were some 6,000 machine tools in the plant—some of them elaborate automatic devices. Preliminary surveys showed that almost every machine had been heavily damaged in the fire. Tooling on the machines had been largely wrecked.

GM is loading machines on trucks as fast as it can pull them from the fire, shipping them out for repairs or rebuilding. The big problem is not the machines themselves, but the delicate, precision-made tooling—cutters, drill bits, and the like—that the machines power. GM is placing rush orders for this tooling wherever it can.

Another problem raised by the fire—where to set up shop until a new plant can be built—seems to have been the easiest to solve. Not far from Livonia is Willow Run, where Kaiser Motor Corp. has just shut down a giant aircraft plant. GM announced this week that it's negotiating with Kaiser for a lease of 14-million sq. ft. of the idle plant.

• **Switching Gears**—But no matter how fast GM can move into Willow Run, observers warn, it'll take at least three months before the company can tool

up and resume production of Hydramatics. This will have widespread effects on the whole auto industry.

Hardest hit will be three of GM's divisions—Cadillac, Oldsmobile, and Pontiac. These divisions have all been heavy users of the Hydra-Matic transmission.

These divisions are badly hurt; but if GM can work it, they won't close down completely. During the past week, GM engineers have been working feverishly to design other kinds of transmission into the affected cars.

As a result, production of Dynaflo transmissions—on which GM's Buick division has had a near-monopoly—will probably be expanded, and the Dynaflos used in Cadillacs, perhaps at the expense of some Buick production. Part of the expanded Dynaflo production, also, may go into Buick Specials—lowest priced in the three Buick lines. This will free some standard synchromesh transmissions, now used in Specials, for Oldsmobiles. Part of the present difficulty is that production capacity for standard transmissions has been sharply cut as the automatics came in, and they are short also. Powerglide transmissions—the Chevrolet division's specialty—may go into Pontiacs.

This will not go very far toward offsetting the huge production loss caused by the fire. But spreading the loss this way will have one important effect: It'll keep all of GM's cars on the market, at least in token numbers.

• **Industry Effects**—Also hurt are some of the companies that buy Hydramatics from GM. Ford Motor Co.'s Lincoln carries Hydra-Matic transmission as standard equipment. Hudson Motor Car Co. builds the GM transmission into about half its output. Two other makes of car—the Nash and Kaiser—also drew heavily on Livonia's output.

This makes some changes in the range-of-competition picture. With Cadillacs and Lincolns out of the running, the Packards and big Chryslers will be able to reach for more of the top-quality market in the period ahead. In the middle-price field, Pontiacs and Oldsmobiles step aside for the Mercury, Dodge, Studebaker, and De Soto.

• **Unit Losses**—With fewer cars on the market, dealers will start trading more cautiously. Pretty soon, they'll probably cut allowances on trade-ins.

This will be more and more true as dealers realize that Pontiac, Olds, and Cadillac were turning out 19,000 cars a week between them. Add to that the slowdown on the non-GM cars that used Hydra-Matic transmissions, and you have a tremendously big cut in production.

Exactly how big depends on how successful, and how quick, GM is in arranging its switch of transmissions.



MASS TENSION boils in Paris streets.

France:

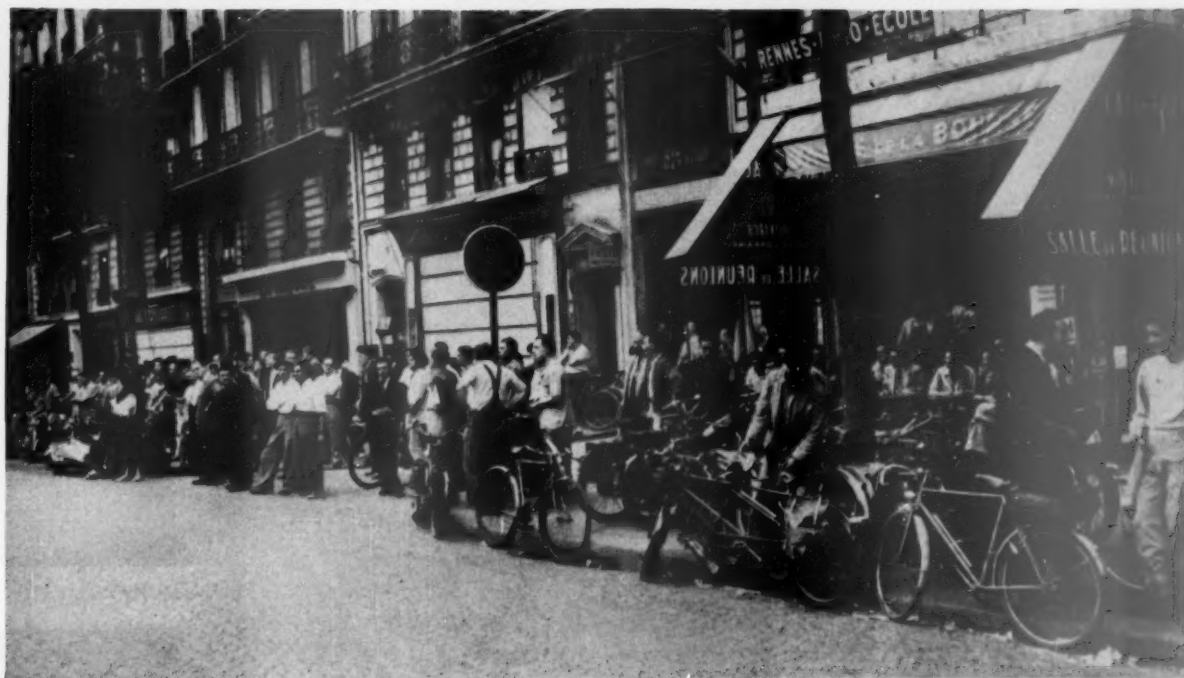
At midweek, an uneasy stalemate hung menacingly over strike-bound France.

The only thing a worried Western world could say with certainty was that the flimsy structure of the Fourth Republic is in danger of foundering completely. So is French democracy itself.

A revolutionary mood has taken over France; it won't be appeased easily nor will it subside overnight.

The superficial cause of the strikes was some rather mild and timid economies in government operations planned by Premier Laniel's cabinet, under special powers granted by the now-recessed National Assembly. Socialist unions, whose members were most affected, called a strike. Catholic labor leaders joined in. The Communists, who have been co-existing peaceably and biding their time, have tried to jump on the bandwagon and take the reins. So far they haven't succeeded. But the Socialist-led strikes have spread, completely tying up French transport, utilities, other services, together with a smattering of private industry. They have taken a seesaw course, however: One day the strikes appeared to be fizzling out, then the next day seemed to herald a general strike of all Frenchmen.

• **Which Way?**—This week, the situation took a grave turn. Both sides handed each other ultimatums—and



FRENCHMEN, baffled by years of depression, war, futile governments, look for something different. And the West worries over . . .

Waiting for a Change

then stood their ground. Laniel threatened tough action—even the army—to break the stranglehold on France.

If he carries out his threat, violence will be hard to avoid. Those observers who conjure up visions of the barricades, something approaching civil war, may not be too far astray. But even if violence is avoided:

- The Laniel government will fall if the National Assembly is called back from its vacation hiding place. A likely successor would be a left-of-center, neutralist government—under severe pressures to go further left toward a popular front with strong Communist support.

- But if the Socialist unions are defeated, you can't rule out the possibility of a rightwing, even reactionary, government, getting power in France.

Either of the alternatives would play into Communist hands. The strike wave isn't a flash-in-the-pan protest against certain Laniel economies. It's a culmination of years of discontent.

- **State of Mind**—The three million-odd French strikers have no clear-cut objectives, and probably only a few have a definite idea of just what started it all.

They do know they hate the government. The strikes have become a "state of mind," one Socialist leader declared last week. That's what makes them dangerous. The state of mind of the average French worker has been a

potentially explosive mixture of frustration, cynicism, and despair.

The bleary-eyed, 58-year-old postmaster who's striking this week probably isn't brooding over Laniel's plan to make him work several extra years before his retirement. He's more apt to be remembering Verdun, and the hungry years of the depression.

The middle-aged Socialist leaders of the Paris Metro union may be thinking of February, 1934, when the workers stopped the armed henchmen of the Fascist Croix de Feu in the Place de la Concorde. Or the spectacle of French troops collecting garbage and operating trucks as buses may remind him of the general strike of 1936. That strike led to the hopes—and later disillusion—of the Popular Front.

The young bureaucrat strolling down the Champs Elysees may not have his mind on whether or not he's going to be fired by Laniel. He may be recalling the German goose-step down the same pavement, and the desperate days of—and bright hopes of—the Resistance. Or he may be thinking of coming home from a two-year stretch in Indo-China to find that the best job he could get paid only \$75 a month.

The pert government stenographer isn't worrying just about wages. She's wondering again why she and her husband can't find an apartment somewhere, and raise a family.

- **Something Different**—In short, the French think it's time for a change, call it revolution if you like.

On any basis, a change is long overdue. The French economy and the French empire stopped expanding in 1931. It froze into rigid cartel-thinking—management, labor, and politics. This hardening of the arteries has continued: Today France, rather than Turkey, is the "Sick Man of Europe" (BW—Jul. 18'53, p106).

World War II changed nothing. The inability of France, potentially wealthy, gifted, and industrious, to form a stable government is the tragedy of postwar Europe. For the past five years the Fourth Republic has been practically indistinguishable from its predecessor in terms of political futility and social sterility.

There have been differences in detail, to be sure. Inflation has replaced depression as the breeder of mass despair. Industrial production spurted 50% above prewar in the first two years of the Marshall Plan, then stagnated. There's full employment but real wages are about the same as they were prewar.

Meanwhile the Frenchman in the street sees governments come and go. He feels the rich are getting richer and he is getting poorer.

- **External**—Abroad, French prestige is sinking rapidly. The cold war has hit France hard. Indo-China is all but gone,

North Africa is seething with suppressed rebellion. The feared Germany has regained its strength.

Add to this brew a slow, but perceptible drift to the right in recent French governments. And now there's the developing Soviet offensive, with its special lures for France, spurring hope that a settlement with Russia is possible, after all.

• **Spark**—The immediate background of the strikes is that the Socialists lost a long battle in the National Assembly when Laniel formed his right-of-center government. The Socialists are now trying to regain in the streets the influence lost in the Assembly. The Socialist Force Ouvriere, whose main strength is in government employees (the majority of industrial workers adhere to the Communist-run CGT), called out its members.

The Socialists' idea was to:

- Demonstrate that the "people" won't accept reforms carried out by a rightist government;

- Force the recall of the National Assembly, then shift the parliamentary balance to the left.

- **Outlook**—The Socialists may be on the losing end no matter what happens. If the strikes collapse, they'll be discredited. If the strikes spread, the Communists may take control.

That's not certain yet. French labor is well organized and generally loyal to its leaders. But Frenchmen are individualistic, and won't follow a strike call unless they think it's reasonable. Several million evidently think the last call was. Whether others, just returning from vacation, will follow along isn't sure.

It's a long jump from a revolutionary situation to a revolution. The French people have been fed up for a long time and it isn't easy to throw off two generations of lethargy. For 30 years foreign observers have been saying that the French political balancing act couldn't go on. But it has.

- **Dangerous**—One thing is certain. The French strikes are a very dangerous development for the West, for NATO, for the U.S.—and a most fortuitous turn of events for Soviet premier Malenkov (BW—Aug. 15 '53, p133). Though the strikes started as a protest against specific government economics, they have mushroomed into a kind of headless mass rebellion against the status quo. Only the Communists seem able to give the monster a head. And they're trying their best to do that.

And even if the French strikes peter out, or are compromised, France's crisis will continue. It will be hard for any democratic government to take any firm economics—and the already serious French financial plight has been immeasurably worsened by the economic loss from two weeks of striking.



INVENTOR of new dial-control system for automatic train routing tried out on Rock Island is London engineer J. B. Griffiths. is shown by number of

CONTROL PANEL is the



Routing Trains

Probably the most complicated job in all railroading is that of guiding trains through the maze of tracks, switches, and crossings at a terminal, yard, or junction point. It's complicated for two reasons:

- (1) The towerman controlling the switches and signals must have at his command a vast fund of information about switch and signal positions, track routes, position and movement of trains in the area under his supervision.

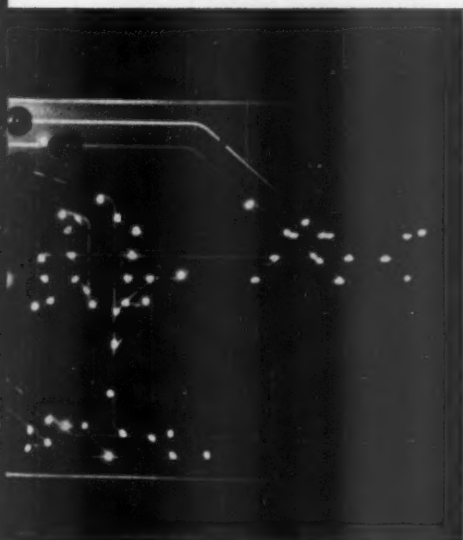
- (2) Equipment must not only be utterly dependable, it must also be designed to prevent any mistake. When

a route is set, signals and safety devices must automatically prevent another train from entering a conflicting route. That is called interlocking.

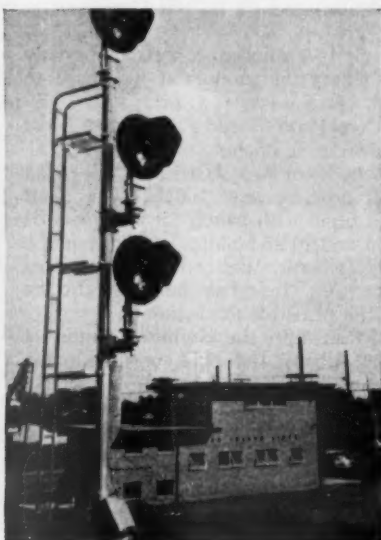
- **New System**—This week the Rock Island RR and Federal Telephone & Radio Corp. demonstrated the first American installation of a new and simplified system for doing this. Called the sequence switch interlocking and panel control system, it was designed and manufactured by Standard Telephones & Cables, Ltd., London. Standard Telephones is an associated company of International Telephone &



"brain" that sets track switches and signals in area represented by diagram; operator is dialing the right route number out of 150.



tiny lights on board indicating setting of switches and signals, location of trains in area.



SIGNALS FLASH on at towers along selected route at turn of dial, but . . .



JUST TO BE SURE these old-time lamps are kept on hand as standbys.

by Dial, 50 an Hour

Telegraph Corp., of which Federal Telephone is a division. Federal is U. S. distributor for the system.

Basically, it works much like a dial telephone; the towerman sets a pointer on a dial for the route he wants—and the apparatus takes over the job of setting up that route; it actuates the switches and signals to permit the train to proceed, interlocks it with all other routes. Once the setting is made, it can't be changed until the train has moved over the route, except by a special device with a time-delay switch to prevent accidents.

• **Simpler**—There are other control systems in use that do a similar job. But this system is claimed to be far simpler, because:

• The towerman has fewer controls to operate, since each dial on his control panel is capable of handling up to 12 routes diverging from a single point.

• It uses motor drive switch gears, or sequence switches, where other systems use electrical relays. On an average, the number of contacts required for any interlocking is about one-seventh as many as when relays are employed.

• **Tryout**—The Rock Island installation is located at Gresham, 9 mi. south of the Chicago loop. From the Gresham tower a single towerman controls a mile of main track, and junctions and crossings for a half mile on either side. The area embraces a junction of the Rock Island and the Baltimore & Ohio RR line, interconnections between these two, a junction half a mile to the southwest, and two suburban stations. These all show up on his control panel.

There are 150 possible train routes through this area, set up through the use of 48 switching machines (which

move the switches) and 41 train signals.

The single tower man controls the movement of 300 trains daily; during commuter rush hours as many as 50 an hour. Yet this doesn't begin to tax the capacity of the control system.

• **Creator**—The man behind this control system is J. B. Griffiths, chief railroad systems engineer of Standard Telephones. He conceived the idea of adapting dial telephone controls to rail switching back in 1935.

His first sequence switch interlocking and panel control system was installed on a British road in 1948; a second, a few months later. The Rock Island installation is his third. He has spent the last 10 months supervising this project, which costs about \$500,000.

World War II was partly responsible for the long delay between idea and fulfillment, but it also gave Griffiths a new slant on rail switching and safety. For he was called on by British military authorities to find a way of sabotaging railroads in France and Germany—and making the results look accidental.

When the Allies invaded Italy, it was Griffiths who found a way to stop trains from Paris to Italy for four days to prevent German reinforcements.

Griffiths says his sabotaging experience taught him a lot he has been able to use since in devising even safer control methods.

Administration Codifies New Power Policy

The Administration this week took another step away from the public power policies of the New and Fair deals. President Eisenhower publicly endorsed the Interior Dept.'s plan for limiting the federal role in the development and marketing of electric power.

The policy statement issued by the department blocks out the specific areas of a federal power program. The emphasis is on private power.

Interior agencies will no longer assume a responsibility to meet all power needs of federal power areas. The government will stay in the power business, but will rely more heavily on private companies to develop hydroelectric resources and furnish transmission lines to dispose of federally produced power. Public bodies will still get preference in sale of federal power, but long-term contracts will be made with electric companies for power public bodies don't take.

Development of electric energy by both public and private agencies will be encouraged. And Interior Under Secretary Ralph Tudor was careful to note that the policy is broad enough to be flexible.

Stepping into Steel Homes

U. S. Steel paves the way for a new try at selling steel homes to private owners by changing name of its Gunnison subsidiary and setting up a new steel panel plant.

No company has ever succeeded with a prefabricated steel home for private owners, though many have tried. Now one of the nation's industrial giants is laying the groundwork for a new effort.

United States Steel Corp. is changing the name of its Gunnison Homes, Inc., subsidiary to United States Steel Homes, Inc. In doing so U. S. Steel makes three things plain:

- It is continuing its policy of emphasizing the corporate name rather than that of subsidiaries (BW-Dec. 6 '52, p. 27).

- It is at last ready to use the prefabricated industry as an outlet for surplus steel sheet capacity—something it had in mind when it bought Gunnison in 1944.

- It is naming its prefabricated subsidiary to reflect the product it will have to sell.

- **New Plant**—Tied to the change is the forthcoming opening of a new 324,000-sq. ft. plant near Harrisburg, Pa., that will produce steel panels. The plant will begin with panels for prefabricated nonresidential buildings such as hospitals, schools, and other institutional structures. Industrial buildings also are in the plans for the future.

Meanwhile, the Gunnison factory at New Albany, Ind., will continue manufacture of plywood panels for prefabricated homes. But the change in Gunnison's name seems to make it clear that Big Steel, perhaps as soon as next year, will try to beat down resistance to factory-made steel homes. No one with Big Steel's resources has tried it before.

U. S. Steel's first prefabricated steel home for the private market already is on the drawing board. It will be sold through Gunnison's existing 450 dealers. And the New Albany factory, says Gunnison, is the world's largest home manufacturing plant.

- **Government Jobs**—Since the postwar metal-prefab housing fiasco, crowned by the Lustron scandal, the dozen or so makers of metal panels have stuck strictly to nonresidential construction except on government contracts or for experimentation. Most of them have turned out homes for federal or overseas industrial housing projects. One, Clements Panels, Inc., Danbury, Conn., produced dwellings and other buildings for a village for 6,000 persons at Thule air base in Greenland. Others, including U. S. Steel, have erected sample homes to test wearing qualities.

- **Snags**—This pioneering has cleared

up the technological problems. In fact, the trouble now is "the steel home is 10 or 15 years ahead of the field," according to an executive of a company involved in the postwar program. He makes this distinction between wood and steel prefabs: Wood is a conventional home and can meet building regulations, which in most areas call for wood studs. A metal prefab is a factory-made home that, to take full advantage of metal as building material, cannot meet regulations as they stand in most parts of the country's residential areas.

U. S. Steel Homes' own panels illustrate the difference. Gunnison's panels consist of plywood bonded to vertical and horizontal studlike timbers spaced approximately 16 in. apart—about normal spacing in framing a conventional house. The steel panels to be produced at Harrisburg will be a sandwich of two pieces of 20-gauge copper-bearing steel filled with 2½ in. of mineral fiber. The steel panel is 4 by 9 ft., the wood panel 4 by 8 ft.

- **Market Prospects**—The fact that U. S. Steel is shooting at the nonresidential field with its first steel prefabricated panels is a good indication that even Big Steel sees formidable problems in venturing into the steel home business. U. S. Steel people say that right now they see a better market for the Harrisburg plant in nonresidential construction.

Government figures put 1952 nonresidential construction at nearly \$5-billion. Perhaps as many as one-half the buildings represented by those figures could be factory-made. One expert says that about 25% of the cost of a building is utility installation, leaving 75% as the potential market for the steel prefabricated companies. That adds up to an annual potential market of around \$2-billion—probably using more than a million tons of steel—in nonresidential construction.

A successful invasion of residential building would involve even bigger figures. One estimate puts last year's prefabricated construction at about 55,000 units at an average cost of about \$10,000. That's only a fraction of the market that the metal prefabricated people feel is there. And, rather than fearing competition from a company of U. S. Steel's size, at least some of them feel its efforts could be a good thing. They've tried to open the market and failed. If Big Steel's ample cash and prestige can do it, everybody cashes in.

This is the kind of Gasoline that Saves the Nation 2 Million Barrels of Crude Oil a Day

As every motorist knows, the modern American automobile is a thing of beauty, power, speed and comfort. To win your approval, each car manufacturer strives constantly to build ever greater values into his various models. Spurred by this competition, automotive engineers have raised the average compression ratio from 5-to-1 in 1930 to around 8-to-1 today, devised more ingenious and efficient carbureters, introduced better valve mechanisms with hydraulic lifters, and created automatic transmissions which can smoothly whisk your car from a dead halt to high speed in a matter of seconds.

But these improvements have had another profound result: *they have challenged petroleum refiners to produce fuels with burning qualities sufficient to enable modern engines to develop all their rated power.*

This challenge has been fully met by research chemists and refinery engineers. But the task has not been an easy—or an inexpensive—one. Crude oil—the industry's raw material—has no simple definite formula. It is a highly complicated mixture of hydrocarbons, and can vary widely from field to field and even from pool to pool.

To meet the automotive challenge, the refiner has devised new processes which convert crude oil fractions into those components which can be



blended to make the most desirable gasolines.

Recently, Sinclair placed upon the market a new super-fuel called "Power-X". It is the product of the most modern, ingenious and effective refining process.

If you drive a postwar car with a high compression engine, you should be able to notice at once the better performance you can get from "Power-X". Provided your engine is in normally good condition and properly tuned, you should get greater knockfree power, and all the mileage engineered into your motor. Thousands of motorists are telling us daily they are having this experience.

More efficient processes which produce today's superior fuels get a higher yield of gasoline per barrel of crude oil than the old refining methods they replaced, and they produce fuels which make possible the use of more efficient engines.

Were it not for these new refining processes, an extra 2 million barrels of crude oil daily would be needed to satisfy the requirements of today's power units.

Not content with past achievements, Sinclair has announced still a better refining process. Already a major unit is being constructed to put this process into operation. This is Sinclair's pledge that even better fuels and greater conservation of natural resources are a surety for tomorrow.

SINCLAIR... A Great Name in Oil

An illustrated booklet describing "Power-X" will be sent on request. Write today to

SINCLAIR REFINING COMPANY, 600 FIFTH AVENUE, NEW YORK 20, N. Y.

**WHELAND COMPANY solves warpage problem,
saves time, labor and materials with**

FARQUHAR Hydraulic Presses



This straightening operation utilizes a 50-ton Gap-Type Farquhar Press on an 8-hour-day production basis.

500-ton Farquhar Hydraulic Press straightens 16' A forged tubes at The Wheland Co., Chattanooga, Tenn.

THE Wheland Company, Chattanooga, Tennessee, uses Farquhar hydraulic presses to help speed production of vital defense products. For example, a 500-ton Farquhar Press is used for straightening forged tube approximately 16' long, varying in outside diameter from 6" to 10", with an inside bore of 2" diameter. This operation alone has solved one salvage problem, since less scrap results as stock distribution is equalized by straightening.

Scrap and salvage due to warpage have been eliminated in another operation, where a 50-ton Gap-Type Farquhar Press is used to straighten $\frac{7}{8}$ " bars, 3" wide, 65" long. Together, the two presses have speeded production. Neither press has required any maintenance other than regular services since installation!

Farquhar Presses Cut Your Costs

Just one more example of cost-cutting Farquhar performance in modern production! Farquhar Presses are built for the job . . . assure faster production due to rapid advance and return of the ram . . . greater accuracy because of the extra guides on the moving platen . . . easy, smooth operation with finger-tip controls . . . longer life due to positive control of speed and pressure on the die . . . long, dependable service with minimum maintenance cost!

Farquhar engineers are ready to help solve your production problems. Your request will bring them running . . . at no obligation, of course.

For free catalog, write to **THE OLIVER CORPORATION, A. B. Farquhar Division, Hydraulic Press Dept., 1501 Duke St., York, Pa.**

Farquhar

HYDRAULIC PRESSES

for Bending • Forming • Forging • Straightening • Assembling • Drawing
Extruding • Jogging • Forging • and other Metalworking Operations

THE OLIVER CORPORATION • A. B. FARQUHAR DIVISION

BUSINESS BRIEFS

Mergers in the air: Spurred by the fever of expansion in the construction industry (BW—Aug. 15 '53, p. 56), Allis-Chalmers Mfg. Co. has arranged to take over assets of Buda Co., big maker of diesel engines. Buda shareholders will consider the deal at a meeting on Sept. 10. Also in the cards is a merger of Massey-Harris Co. and Harry Ferguson, Inc.—makers of farm implements and tractors—into Massey-Harris-Ferguson, Ltd. The new company will have plants on both sides of the Atlantic.

Another vice-president of Montgomery Ward & Co., Inc.—John E. Struggles—has resigned. Rumors say that he, like other officers who have left the company, was unable to get along with aging, ultra-conservative board chairman Sewell L. Avery. The \$1-billion-a-year company now has only two vice-presidents left.

Another pipeline: Standard Oil Co. (Ind.) has started building a 205-mi. line from Mandan, N. D., to Moorhead, Minn. The line will carry Williston Basin oil products southward, connecting at Moorhead with the company's existing pipeline network into eight midwestern states. To process the oil, the company is putting up a refinery at Mandan.

Copper production must hold up at all costs, the government figures—and hence has agreed to buy almost 8-million lb. of the metal from Copper Range Co.'s "high-cost" mine at Painesdale, Mich. Going price of copper is 28¢ to 30¢ a pound; the government will pay Copper Range 32¢. The company couldn't afford to operate the mine, officials say, at a lower price.

Plastic pipe looks like a good bet to Youngstown Sheet & Tube Co. The company has bought an interest in Perrault Fibercast Corp., Tulsa, maker of glass-fiber reinforced plastic pipe. The Tulsa company's name will be changed to Fibercast Corp., and its products will be distributed by three YS&T subsidiaries. Another metals company—Republic Steel Corp.—entered the same field not long ago.

Monsanto Chemical Co. has developed a simplified way of producing cortisone—wonder drug used against arthritis and other ailments—from common chemical raw materials. Present production methods are complex, costly, involve hard-to-get materials. Monsanto says its process may provide unlimited quantities of the drug for the first time.

Are your machine tools cutting costs... or profits?

A BILLION A YEAR IS BEING WASTED:

How to Estimate Your Direct Labor Losses from Outmoded Machine Tools

THE PROBLEM: To evaluate the machine tools in your plant in terms of direct labor costs, as a factor in determining the profitability of replacing over-age equipment.

THE FACTORS: According to an inventory of metalworking machine tools, U. S. industry in 1950 was operating 1,762,000 units, of which 95% (1,673,900) were more than 10 years old, or of designs that old. (Actually, 21% of the units were more than 20 years old.)

On the basis of conservative averages

for direct labor costs alone — disregarding all other factors — the retention of outmoded machine tools is costing American metalworkers a cool billion dollars a year.

THE SOLUTION: Obviously, an exact formula for profitable replacement must reckon with a number of factors, many of them relating to specific individual operations. Here, however, is a quick way of computing approximate losses in direct labor costs from the use of obsolete machines.

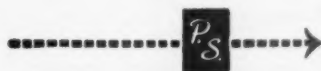
Machine	Assumed Operating Hrs. Per Year	Assumed Labor Cost Per Hour	Direct Labor Cost Per Year, Over-Age Machine	% Increased Machine Productivity Today's Models	Labor Cost Per Year New Machines *	Annual Loss
Saddle Type Bar Feed Turret Lathe	2,000	\$2.00	\$4,000	100	\$2,000	\$2,000

*Column 3, divided by column 4 plus 1.00, i.e. 4,000 divided by 2.00.

These figures deal with *direct labor operating costs only*. When you add the savings possible in the many other cost factors, the initial price of the new machine can be saved in a comparatively short time.

Improvements in machine tool design — largely since World War II — have made possible an average of 40% more productivity, with individual gains ranging from 5% to 500%. **

How much of the wasted billion is *yours*?



Jones & Lamson is regularly working with large and small manufacturers in every branch of the metalworking industries on the problems of increasing productivity and profits through the use of today's high-efficiency machine tools. Frequently, the initial investment in machine tools is recovered in a year or less.

**SOURCE: American Machinist, August 7, 1950, Special Report "Stop that Waste" (includes table of percentages for most machine types)

JONES & LAMSON MACHINE COMPANY

Dept. 710, 503 Clinton Street Springfield, Vermont, U. S. A.

Turret Lathes — Fay Automatic Lathes — Thread Grinders — Optical Comparators — Threading Dies & Chasers



1. Hateful Henry, snide old man of sour reputation, came snarling into Statler just to stir up consternation. "I've heard about you folks," he rasped. "I'll put you to the test! There's no one in the world who'd want to treat *me* like a guest!"



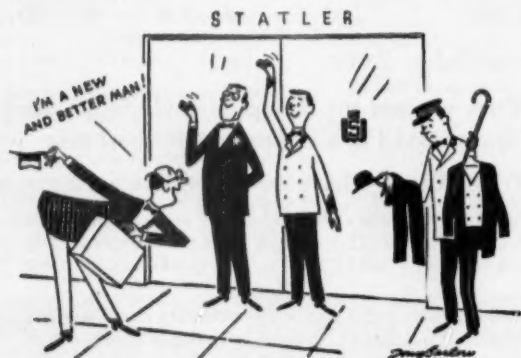
2. When Henry saw his Statler room, his voice was harsh and grating. "I'm trying to be difficult—you're not co-operating! This room's too clean! That bed's too soft—the best I've ever had! There's *nothing* to complain about! You trying to make me mad?"



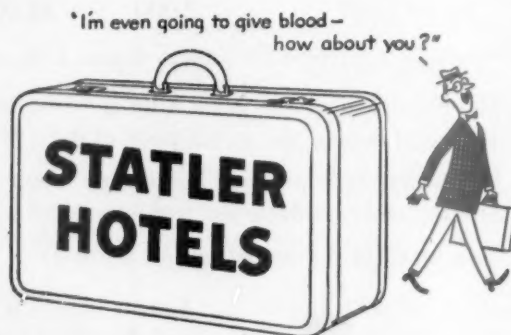
3. "So far as I'm concerned," he said, "I'd rather *not* be clean. But the water's hot, there's lots of soap, and the whitest towels I've seen. It puts me in a cheerful mood, and I just can't destroy it. And no one else need ever know—I may as well enjoy it."



4. Then later in the dining room each dish that Henry tried, he found was really perfect. And he broke right down and cried. "Oh, the years I've spent complaining! What a waste of time," he said, "when all the while I could have been enjoying life instead!"



5. "This Statler hospitality has changed me through and through! To make a guest feel more at home, there's *nothing* they won't do! Farewell, kind Statler people—I'm returning when I can—I've turned a new leaf over—I'm a new and better man!"



STATLER HOTELS: NEW YORK • BOSTON • BUFFALO • DETROIT
CLEVELAND • ST. LOUIS • WASHINGTON • LOS ANGELES

★
ANOTHER GREAT NEW STATLER—HARTFORD

(OPENING SUMMER, 1954)

Do you owe yourself a treat?
Make it a weekend at the Statler!

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
AUG. 22, 1953



First Cabinet switch may bring Dan Thornton to Washington. The Colorado governor, rancher, and Eisenhower pal, is mentioned as "the next" Agriculture Secretary.

He would replace Benson, who, associates say, may prefer to resign, rather than go along with extension of the present price-propping policy beyond 1954 crops. Benson wants less Washington in farming.

The sniping at Defense chief Wilson is inspired by service brass—not by the top Army, Navy, and Air Force officers, but by subordinates. They feel Wilson isn't "sympathetic"—that he's more interested in making an economy record than in building adequate defenses. Kyes is hit, too, as Wilson's top deputy, and as the "big influence" over Wilson.

Admiral Radford, new head of the Joint Chiefs of Staff, will play a bigger role in defense policies than did his predecessor, Gen. Bradley, who had been accused of playing Democratic politics. Radford will review the whole defense setup and report to Eisenhower by mid-October.

Labor Secretary Durkin is still on the spot, working without CIO support. But he improved his position within the Administration when he fired back at his old AFL plumbers union for an attack on Eisenhower policies.

Vice-President Nixon is getting a bigger and bigger role from Eisenhower. With Taft gone, the plan is to give Nixon an enlarged leadership assignment in the Senate. Note that Eisenhower picked him to head the new committee to end racial discrimination on government contracts.

Senator Ives of New York will plug hard for FEPC legislation next year. He was discouraged from doing it this year by Taft. He will push it when Congress comes back, however. Ives is the best bet to take the Republican nomination for governor in New York if Dewey doesn't want it. The GOP regards him as the best alternative vote-getter they have in the Empire State for 1954.

Farm politics may be breaking Eisenhower's way and, if they are, holding Congressional control next year will be easier for the Republicans. The signs aren't conclusive at this stage. But they do indicate that Eisenhower doesn't have to have a new farm program to stay on top.

That's the significance of the wheat vote. The growers showed that they are willing to accept acreage controls in return for high price props, meaning 90% of parity. Other tests of farm sentiment are coming, on cotton and perhaps on corn. A repetition or two of the wheat landslide might well persuade the Administration to keep what it has for the farmer, even if it is hard on the Treasury, meaning the taxpayers.

Benson is opposed to the rigid, high-level supports. He goes along with the present law, which expires with 1954 plantings. He wants something with more flexibility in it, and which requires less Washington direction. He has no substitute. He may quit, though, rather than go along.

Watch the feuding within the big unions. They will show strengths and weaknesses of the leaders who took over from Green and Murray.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
AUG. 22, 1953

AFL chief Meany called Hutcheson's bluff, something Green never did. As a result, Hutcheson and his carpenters walked out on the red-hot issue of which union controls jobs.

Beck of the Teamsters now is stronger within the AFL. He got the spot on the executive council left vacant by Hutcheson. So the chances that Beck will make a deal with John L. Lewis are lessened.

Odds are Hutcheson won't join up with Lewis. They aren't friendly. They traded blows in the 1935 convention, after Hutcheson needled Lewis about pulling unions out of the AFL to start the CIO.

Meany sees himself as a strong AFL leader. He cracked down on the racket-ridden longshoremen, in addition to standing up to Hutcheson. His next major move will be at the St. Louis convention next month. There, he will come up with a plan for settling AFL jurisdictional disputes without strikes. He may propose a "czar" to rule on these feuds.

Reuther may move closer to Meany, if only for self protection. In the CIO, McDonald, boss of the big steel union, has no love for Reuther. He has been flirting with Lewis, more with an idea of raising doubts about the CIO's future under Reuther's leadership than with an intention to join the mine boss in a bigger third labor organization.

The Army may get the first atom-powered electric plants, patterned after the submarine propulsion unit now being tested by AEC at Arco, Idaho. These will be small power producers, compared with regular electric plants.

But they will be "packaged plants," which can be installed in Army bases in out-of-the-way places, such as Thule, Greenland. In such places, fuel is a problem. Transportation pushes up the costs. Atom power costs will be 3¢ to 6¢ per kwh. That's high. But it's competitive with other fuels, where a long, expensive haul is involved.

If you need a small business loan, you may be disappointed in the new loan agency being organized—the Small Business Administration.

SBA won't be a real substitute for the RFC—a major lending agency.

The big push will be for "capital pools," similar to those organized by civic groups in the six New England states. SBA will only be a participant, along with banks, insurance companies and other lenders.

Small business pressure may change those plans. But the policy now is for the government to recede from the lending field. SBA head Mitchell is touring the country, to discuss his ideas with state governors and others. Meantime, the line of small businessmen wanting government loans is growing longer and longer. Mitchell may have to recognize politics.

U.S. aid to reconstruction of Korea will be big-scale, as planned. The program in the works calls for fertilizer plants, to aid agriculture; multipurpose dams, for irrigation and power; steam plants, for power; mining developments, including iron and tungsten. That's a partial list. U.S. contractors will get a preference. Syngman Rhee insists that Korea won't do business with Japan. Costs are figured in hundreds of millions.

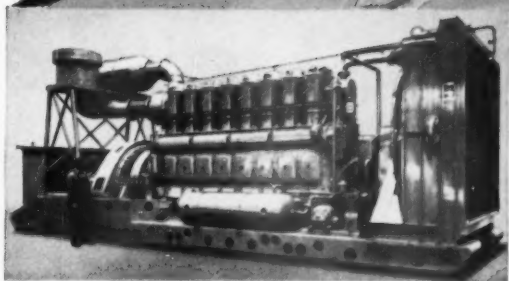
Power Spans the Globe *on a Magic Carpet*



ENTERPRISE Portable Diesel Electric Generators

*... help get big jobs
done faster... for less!*

Transportable diesel power now provides an immediate source of electricity even in remote areas. ENTERPRISE completely self-contained Diesel generators can be moved anywhere in the world — ready to operate the minute they arrive — providing electric power for building dams, docks, and hundreds of other large construction projects. Also, they are adaptable as permanent stationary power plants for regular, standby or emergency service. For versatile power flexible to *your* needs look to ENTERPRISE — the choice of power experts.



A 1000 KW Enterprise Portable Generator Set

ENTERPRISE Diesels, serving virtually every field of industry, are available in portable, stationary and marine models; straight diesel, dual-fuel, spark ignition gas, and heavy residual fuel oil burning types, from 73 to 2285 HP. Generator sets range from 47 to 1624 KW.



GENERAL METALS CORPORATION

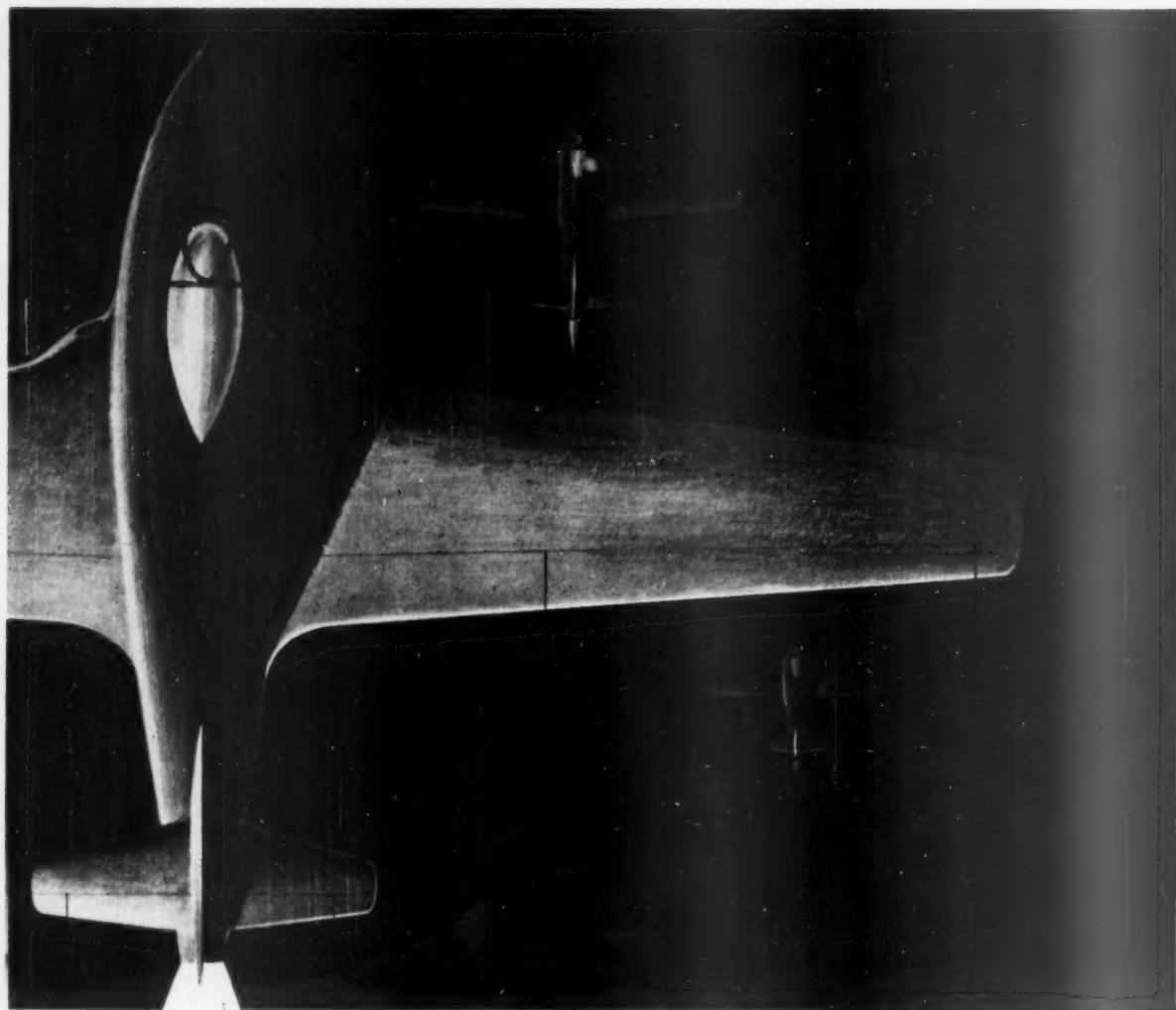
Subsidiary of TRANSAMERICA CORPORATION

EXECUTIVE OFFICES: 18th & FLORIDA STREETS • SAN FRANCISCO 10, CALIFORNIA

ADEL DIVISION • Aircraft, Industrial & Marine Hydraulics . . . Plants at Burbank, Calif.; Huntington, W. Va.
ENTERPRISE DIVISION • Marine & Stationary Diesels, Oil Burners, Food Process Equipment . . . Plants at San Francisco, Calif.
PACIFIC FITTINGS DIVISION • Pipe Fittings, Couplings, Nipples . . . Plants at San Francisco & Hollywood, Calif.
METALS DIVISION • Foundry & Forge Products . . . Plants at Oakland & Los Angeles, Calif.; Houston, Texas



HYDRAULICS • LINE SUPPORTS • DIESEL ENGINES • PROCESS MACHINERY • OIL BURNERS • CASTINGS & FORGINGS • PIPE FITTINGS



When there's no time for "Down-Time" try ALCOA ALUMINAS

BG *That's what the BG Corporation did!* Manufacturers of aviation spark plugs, igniters and thermocouples, BG had the task of developing an insulator that could withstand the terrific thermal and mechanical shocks created by jet engines. Ordinary insulators couldn't take the heat. Engines "went down" after a few hours flying time. BG's experience with ALCOA Aluminas resulted in a ceramic insulator able to take the punishment a jet offers.

Composed largely of ALCOA Alumina, these insulators withstand temperatures from 900° F in thermocouples to 3500° F in igniters. The development of the jet engine was substantially aided by the use of aluminum oxide ceramic insulators.

Fuel nozzles, combustion-chamber linings, turbine blades, vanes and nose pieces are *special* kinds of services for alumina refractories. But the properties

of ALCOA Alumina that make it so effective here are the same that add life to *all* refractories.

If you are dealing in high temperatures, alumina refractories will help you increase output . . . decrease down-time. Let us tell you about it. Write to ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-H Alcoa Building, Pittsburgh 19, Pa.

Alcoa 
Chemicals

ALUMINUM COMPANY OF AMERICA

PRODUCTION

When a plant switches back to peacetime products...



... Government machine tools are a problem. You can:

Lease machine tools used for defense contracts, for civilian production. The annual cost: about 10% of the tools' value. Some tools, though, will be too specialized for civilian products...

If you can't use the tools, you may be able to store them in your plants and warehouses. The government foots the bill for the storage. Studebaker Corp. is one manufacturer that will try this method. Or...

As a last resort, the government will mothball the machinery in warehouses or ship them to the closest government depot. The drawback: it may take a lot of time to get them out of storage if there's another emergency.

Setting Up Standby Facilities

The plan for keeping plants on a standby basis shown above, worked out by the Army Ordnance Corps, is one big step bringing the U. S. close to having a real standby defense industry—closer than it has ever come before.

So far, however, the future defense production picture has been developing as a kind of cart-before-the-horse setup. Some specific questions are being tackled ahead of basic, over-all policies. While the military has begun planning the mothballing of machine tools that are being returned by contractors, some top government agencies—such as the Defense Dept. and the Office of Defense Mobilization—haven't yet agreed on the standards for a standby industry.

• **Vance Plan**—Since before Pearl Harbor, Washington has masterminded at least four mobilization plans besides

the one used in World War II. Each one was devised to suit the economic and industrial conditions of the times. But none was ever set up so that it could serve for a wartime, peacetime, and guns-and-butter economy.

Last January, the ball started rolling on still another scheme. A committee headed by Harold S. Vance, president of Studebaker Corp., turned in a report—actually a plan—on defense mobilization to the Office of Defense Mobilization (BW-Apr. 25 '53, p. 72). The gist of it was this: Determine the mobilization requirements that are within industry's capacity; get the machinery that will round out that capacity; keep it up-to-date and in standby condition.

The government, through different agencies, lately has been adopting the Vance plan, but on a slow, piecemeal

basis. Here's how far agencies have got with the plan:

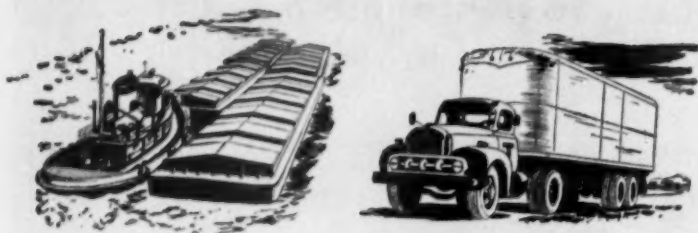
• Early last month, Defense Mobilizer Arthur S. Flemming released a formal announcement that reaffirmed the new Administration's support of the Vance plan, and other angles of broad-base mobilization.

• Around the same time, President Eisenhower signed a bill that specifically authorized the Defense Dept. to "establish a mobilization base through the acquisition and stockpiling of machine tools."

• The Army Ordnance Corps has started a program that will store government-owned machine tools—the ones used by manufacturers whose contracts are expiring—so that groups of tools will be kept together as production packages.

• **Controversy**—But Washington ex-

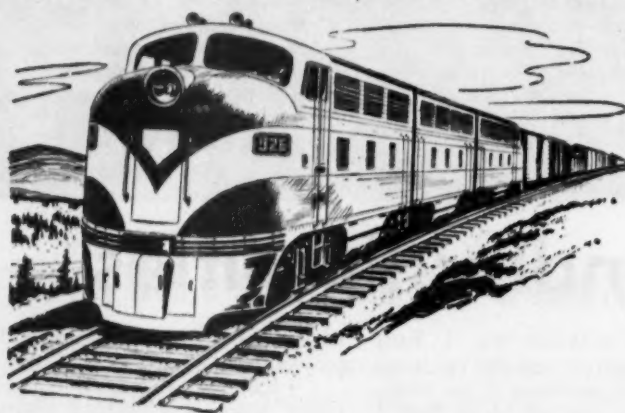
All the other forms of transportation combined



do not carry as many tons
of freight as many miles



as America's Railroads ...



and the railroads...without
aid from the taxpayers...do
their huge hauling job at a
lower average charge than
any other form of general
transportation.

ASSOCIATION OF AMERICAN RAILROADS

WASHINGTON 6, D. C.

You'll enjoy THE RAILROAD HOUR every Monday evening on NBC.



perts are taking ODM's announcement and the machine-tool bill with a grain of salt. They don't feel the plans will survive. Neither exactly jibes with proposals that have been announced by the Defense Dept. Secretary of Defense Charles E. Wilson has favored narrowing the defense base, saying it is too costly; now the experts feel he has also shelved any plans for more purchases of machine tools.

• **Ordinance Project**—Of the three, Ordinance's plan stands the best chance of getting ahead. Ordinance will soon be left with a slew of machine tools, now that manufacturers' contracts are expiring. After the last war, the government had a huge surplus of tools and no plan for handling them. So this time, Ordinance is laying the groundwork early. The big job is estimating the costs of storing the individual packages and getting industry's cooperation for the formidable project that's ahead.

Ordinance thinks that there are generally three different reasons for putting a plant on standby. To start with, a plant might have plenty of expensive, permanent equipment, the kind that couldn't be removed without ruining it. Or else the product produced by the plant takes a long lead time in getting started, or presents difficulties, engineering-wise, in adapting it to an assembly line.

One or all of those factors applies to a defense product such as ammunition, tank parts, or fire-control equipment. They need plenty of lead time, know-how, and engineering, before they can be called finished products. So they're a natural for standby status. On the other hand, some defense goods that are primarily commercial products are always available come a mobilization.

• **Storage Choice**—For the present-day contractors who will buy the standby idea, Ordinance offers a choice of ways for storing government-furnished machinery:

- The contractor can retain the machinery, keep it in good shape, and lease it for commercial production at a fixed rental.

- The manufacturer can leave the machine tools in place, but let them lie idle. That way, the government pays the contractor rent for the plant space.

- If space is tight, the contractor can always dismantle the machinery and store it in a corner of the plant, again receiving rental for it.

• **Company Reactions**—The big question is whether the contractors are as willing and eager about the standby idea as Ordinance. So far, some manufacturers approached by Ordinance have turned thumbs down on the operation. At the end of their contracts, they want to get defense work out of their plants

Acme Steel Strapping Insures S.A. *(Safe Arrival)*

Strapped shipping cartons pass Maytag Company torture tests



BOUNCED AND BATTERED. Acme Steel Strapping holds securely as fibreboard shipping carton containing Maytag automatic washer is vibrated and then butted on each side and bottom in "torture test." Results prove steel strapping superior to other methods.

From washers to watches, goods in shipment travel safer when protected by Acme Steel Strapping. For steel strapping guards against pilferage and damage in transit. It insures S. A. (Safe Arrival).

Strapping saves on packing time, too . . . on packing materials . . . and frequently on freight rates (because it weighs so little, takes so little space).

There's an Acme Steel tool for every packing job, an Acme Steel method for every shipping problem. Write to Acme Steel Products Division, Dept. BW-83, Acme Steel Company, 2840 Archer Ave., Chicago 8, Ill. Or Acme Steel Company of Canada, Ltd., 660 St. Catherine Street W., Montreal, Quebec.

**ACME
STEEL**

STRAP IT...STITCH IT...SHIP IT...SAFELY!



CUTS WORK IN HALF. Packing Maytag automatic washers with Acme Steel Strapping proves far faster and easier than a similar Maytag operation employing previous packing methods.

FINAL STEP. When strapped cartons leave packaging department, they are loaded into freight cars and quickly anchored in place with Acme Steel Strapping.



FREE

Direct from shipping headquarters, magazine that tells the latest shipping news and developments... yours free for the asking! Just send in the coupon...



ACME STEEL CO., Dept. BW-83
2840 Archer Ave., Chicago 8, Illinois
Please send me a copy of "Confab."

Name _____ Dept. _____

Company _____

Street Address _____

City _____ Zone _____ State _____

*Better see
H&D!*



Easy to set up and pack,
this Heavy-Duty corrugated
box provides extra product
protection and identification.
For valuable packaging information—
write for booklet,
"Creative Package Engineering."
Hinde & Dauch, Sandusky 1, Ohio

H&D

HINDE & DAUCH

17 MILLS AND FACTORIES • 40 SALES OFFICES

Our 65th Year

bag and baggage. In those cases, Ordnance must cart away its machinery and store it in some nearby warehouse or depot. (Ordnance will also do the same for a cooperating company that has no storage space at all.)

As a starter, though, a couple of top manufacturers have agreed to go along with Ordnance. Last week, Ordnance announced that Ford Motor Co. and Studebaker Corp. will lease or mothball a total of about \$36.5-million of machine tools.

Ford's Livonia (Mich.) plant, which is now finishing a contract for medium M-48 tanks, will store \$25-million worth of machine tools and \$10-million worth of jigs at a nearby government warehouse that's in the planning stages. Studebaker has about \$1.5-million of machinery used in a truck contract. Studebaker's annual rental for using the tools will be about 10% for \$200,000 worth.

Along with Ford and Studebaker, some other big manufacturers are bringing their truck and tank contracts to a close. General Motors Corp., American Locomotive Co., and the Lycoming-Spencer Division, of Avco Mfg. Corp., are mulling over Ordnance's offer to store their tools.

• **Keeping Tabs**—While it's been lining up standby plants, Ordnance has also been sharpening up its system for keeping track of the huge mass of machinery. The big storage project calls for sure-fire methods of identification and paperwork, since a tool is useless if you can't find it quickly or haven't a "profile" of its operation.

Ordnance plans to handle the records by a newly adopted filing system at its Rock Island (Ill.) arsenal. For every tool, Ordnance will make out an easy-to-find locator card that tells the type of machine, its physical condition, and productive capacity. What's more, Ordnance plans to inspect each assembly line before mothballing and individually repair each machine.

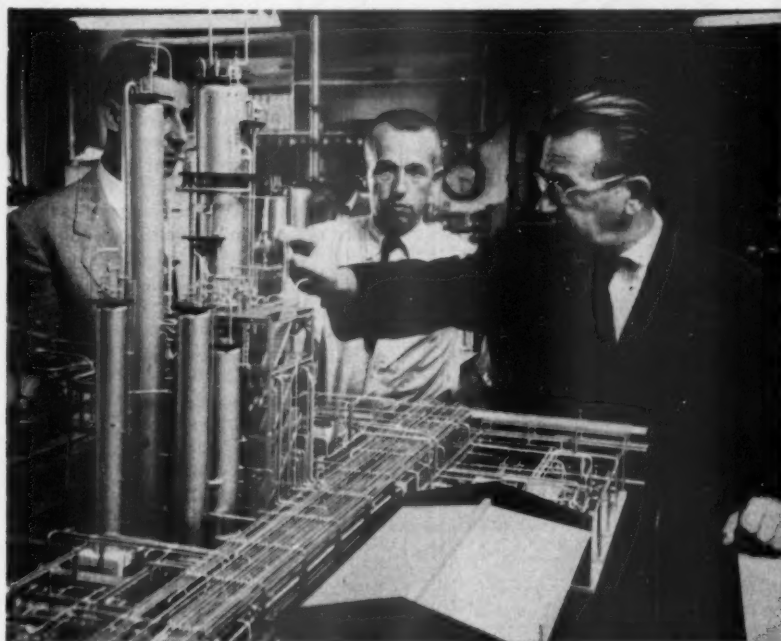
• **No Expansion**—However the storage program works out, Washington experts predict that current machinery capacity won't go much beyond its present level. Their reasons mostly center around the recent budget.

In line with the Vance plan, the Truman budget for fiscal 1954 asked for \$500-million for purchases of reserve tools, a fund that's handled by the Defense Dept. But Congress squeezed the Vance plan money down to half that. The cut was probably the result of the Pentagon's lukewarm support for the reserve tool program. At the appropriation hearings, Secretary Wilson and his aides said the Pentagon didn't know whether it needed as much as \$500-million, or what equipment would be bought with the money.

Actually, the recent appropriation

will be lumped together with other money that hasn't been spent for machine tools, totaling about \$850-million altogether. Last week, the Pentagon dropped another hint as to its growing

coolness toward machine-tool expansions. The Air Force got Wilson's O.K. to use about \$35-million originally earmarked for production equipment for other nonmachinery products.



SCALE MODEL BUILDER Roger Merrill, Jr. (center), checks with engineers of Foster Wheeler Corp. details of FW's new type catalytic cracking unit.

Why Designers Go for Models

Modern design, particularly in chemical and power plants, has become so complicated that more and more engineering firms are turning to scale models to simplify both the drawing and interpreting of blueprints. An accurate model aids the designers and engineers in visualizing complicated networks of piping crossing through many levels. Sometimes it can even replace an elaborate set of drawings.

A complicated industrial model may require 2,000 hours or more to build, cost \$10,000 or \$15,000. A good example is the model (above) of the cat cracker—or catalytic cracking unit used to produce higher octane fuel—which is to be built in Colombia for the Empresa Colombiana de Petroleos, a subsidiary of Standard Oil Co. (New Jersey).

If the model eliminates a mixup in construction or points up a bug in the layout, it's worthwhile just for that. But companies have found they can continue to use the model over and over to get the greatest value out of the investment. Here's the pattern:

Checking drawings. When preliminary drawings of a new plant have been made, a scale model provides a fool-

proof means of checking them for interferences, poor arrangements, inaccessibility of valves and controls, insufficient room for maintenance and replacement of equipment.

Plant construction. After a model has aided in designing a plant, it can be used at the plant site as a guide in the planning and coordination of construction.

Personnel training. The next phase in scale model's life is a classroom where it provides a convenient visual aid for training operating crews.

Public relations. The last stop is usually the executive offices of a company where the model can be used to explain technical aspects of a plant's operation to visitors.

Atkins & Merrill, Inc. of Sudbury, Mass., which built the model refinery has been in the business since 1939. It has pioneered in applying scale models to design engineering, converting a hobby into a sound business. The company prides itself on accuracy and has developed miniature machines, valves, and fittings with such precision that an expert looking at a pipeline, for example, can tell whether valves are open or closed.

THE THRILL A MAN DESERVES



SHOW YOUR SON THE THRILL OF A GUN

Isn't it time you show that boy of yours how to handle a gun? Probably time, too, you both experienced the close companionship that exists between father and son in the field. Let's go . . . let's go this weekend! When you go, take along a Winchester Model 42 shotgun. This perfectly-balanced, light and easily-handled, 410-gauge shotgun combines all the World-Famous Winchester features. Make the most of your days together . . .

with a
WINCHESTER
TRADE MARK
MODEL 42

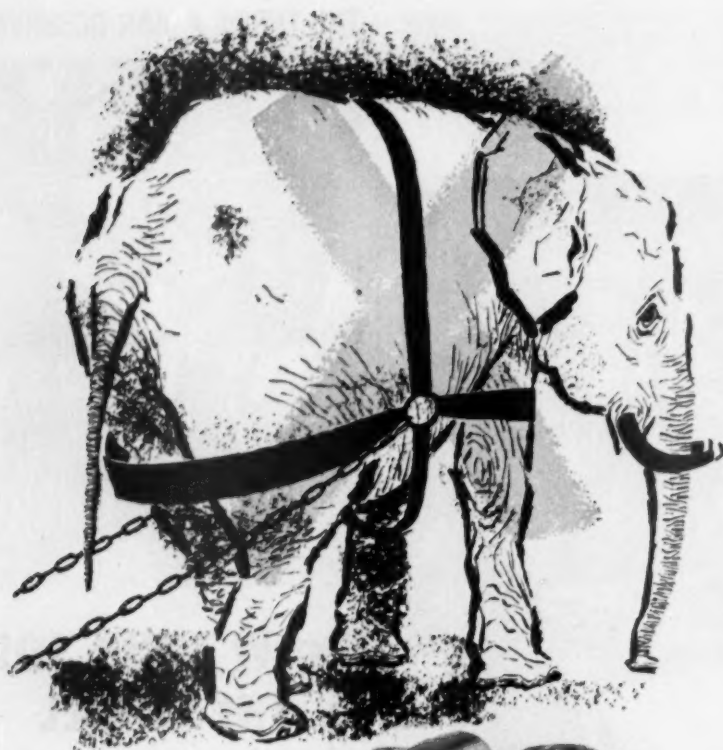
- Light weight, smooth, reliable take-down action.
- Winchester Proof (chrome-molybdenum), the finest gun steel.
- Chambered for either 2½" or 3" 410 shells.
- Cross-action safety trigger lock.

\$81.70

Price subject to change without notice

ANOTHER **Olin** PRODUCT

ARMS AND AMMUNITION DIVISION OF
OLIN INDUSTRIES, INC., NEW HAVEN 4, CONN.



**be modern-
go** *Lightweight*



12 1/2 POUNDS

**Now You Can Make Your Products Lighter
with the POWER PRODUCTS *Lightweight***

Give your customers a break and your products a big sales boost . . . go lightweight. The Power Products Lightweight 2-cycle engine has created a new trend in portable power equipment.

The Power Products
Lightweight gives you
all these features.

- LIGHTWEIGHT
- MINIMUM EFFORT STARTING
- LONG LIFE, LESS MAINTENANCE
- FULL CARBURETION
- BALL BEARING MAIN BEARINGS
- SEALED DRIP PROOF CRANKCASE
- FULLY ENCLOSED, FLY-BALL GOVERNOR
- NO OIL CHANGING OR CHECKING
- CLOG FREE COOLING SYSTEM



POWER PRODUCTS CORPORATION

GRAFTON, WISCONSIN

Fluid Coking . . .

. . . may provide more gasoline and diesel fuel—but don't look for lower prices at your dealer's pump.

With more railroads switching to diesel engines, and more automobiles on the highways, a new problem has risen to plague the petroleum industry.

These two changes in habits have greatly increased the demand for the light petroleum products—gasoline and diesel fuel—while orders for heavier products, such as fuel oil, have fallen off. Yet, a barrel of crude has been turning out the same percentage of heavy products as before.

Last week, Standard Oil Development Co., research and engineering affiliate of Standard Oil Co. (New Jersey), announced it had a solution to the problem. A new refining process, according to Standard Development, will increase the percentage of light products obtained from a barrel of crude.

To show their faith in the new process, called fluid coking, two other Standard Oil affiliates, Carter Oil Co. and Esso Standard Oil Co., announced they would start immediate construction of refining units. Carter Oil expects to have its 3,000-bbl.-per-day unit in operation at Billings, Mont., in late 1954, and Esso will have a 10,000-bbl.-per-day unit at Baltimore and a 20,000-bbl.-per-day unit at Baton Rouge operating by early 1956.

In addition to solving the problem caused by the change in markets, Standard Development feels that the new process will make it economical to refine heavy crude oils that have been bypassed before. By increasing the amount of high-value light petroleum products that can be obtained from heavy crude oils, such as some of the California oils, fluid coking will make it more economical to operate these wells.

• **No Price Cut**—Standard Oil pointed out, however, that the new process will not cause any reductions in the price of gasoline: The extra gasoline obtained will cost the company just as much. But it will increase the amount of light products available, which might cut down on the need for some oil imports.

The fluid coking process handles the heavy residual product that is left after crude has been processed through standard refineries and the usual light products removed. Up to now, refineries have diluted it with good light petroleum products to make a heavy oil that has been sold mainly for fuel purposes.

The new plan, however, is to feed this heavy product to a fluid coking refinery as it is drawn from the standard



Window Panes Aren't Expensive But **REPLACING** Them Costs a Lot

How much does it cost to replace a broken window in *your* plant? Surveys show that the average cost, including labor—the big item—is \$3.00 for a single 12" x 18" pane. The prevention of window breakage can mean a sizeable reduction in maintenance costs.

A good way to prevent breakage is to glaze with PLEXIGLAS acrylic plastic. This light weight, durable, *outdoor* plastic has the strength and resilience to withstand the enemies of industrial glazing—impact, twisting, and vibration.

PLEXIGLAS is available as clear transparent material, and in transparent and translucent colors which reduce direct sky glare, provide excellent diffusion of daylight, and curtail solar heat.

PLEXIGLAS

PLEXIGLAS is an ACRYLIC PLASTIC. It should be installed and maintained as described in our brochure, "Window Glazing with PLEXIGLAS". Copies are available promptly on request.



PLEXIGLAS is a trademark, Reg. U. S. Pat. Off. and other principal countries of the Western Hemisphere.
Canadian Distributor: Crystal Glass & Plastics, Ltd., 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.
PLEXIGLAS is listed in Sweet's Plant Engineering File, Section 44/Ra.

CHEMICALS

FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

TOLEDO FACTORY-TRAINED SERVICE

near you



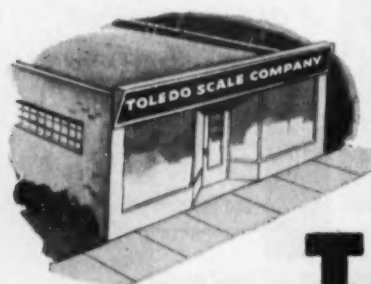
IN 200 CITIES
of United States and Canada

Your scales tell you the essential facts on materials moving into . . . through . . . and out of your plant . . . facts on which **COST CONTROL** depends!

Neglect is costly because loss through inaccurate weights is added to the cost of repairs and down-time.

*Toledo Factory-Trained Service—and Periodic Inspection—*solve this problem for you! Everywhere, Toledo Service is readily available—as near as your phone in more than 200 cities. Toledo Servicemen have the know-how and specialized tools and equipment to perform your work rapidly and accurately.

Write for bulletin 3913—learn how a Toledo Service Agreement for regular inspection will help you guard costs. Toledo Scale Company, 1209 Telegraph Rd., Toledo 1, Ohio.



Near you is a Toledo sales and service office where competent Toledo-men can be of help in solving *any* scale problem... whether it's weighing, counting, checking, testing, batching or force-measuring.

TOLEDO
HEADQUARTERS FOR SCALES

refining operations. The new process separates more light petroleum products from the residual material. The remaining heavy carbon is turned into a coke product, which can be sold as a fuel or used in various manufacturing operations.

• **Double Savings**—According to Standard Development, this will result in a double savings. More gasoline and diesel oil will be available, and the light products will no longer have to be used to dilute the heavy residual product to make fuel oil.

Work on the new process was begun about four years ago. A 100-bbl.-per-day pilot plant at Esso Laboratories in Baton Rouge was used to work out the idea. Plant engineers got 4,700 additional bbl. of gasoline, 1,500 additional bbl. of home heating oil, and 400 tons of coke from 10,000 bbl. of residual product. Normally, they would have added about 5,000 bbl. of lighter products to the residual material for conversion to heavy fuel oil.

Standard Oil Development holds patents on the new process, but expects to make it available to the industry "at reasonable royalty rates."



First Principles

Free ballooning—man's first successful way of getting up into the air—is back. Goodyear Aircraft Corp., a subsidiary of Goodyear Tire & Rubber Co., uses the balloons for training student blimp pilots. To qualify, a student must make a one-hour balloon flight. The training is designed to help him handle an engine-powered blimp if its engines fail during flight.

Raccoons to Radar



The variety and volume of
AIR FREIGHT keep zooming.
The reason: profits!



Only the fact that shipping by air is *more* profitable can account for the tremendous expansion of **AIR FREIGHT**. *It has multiplied six times in the last six years!* Yes, shipping air freight can save you important money!

It saves on crating costs . . . on insurance, interest, storage, depreciation. It gives you distribution where you need it, *when you need it!*

It lets you operate with low inventories. Your local airline will give you specific facts . . .

show you air freight success stories that will amaze you. Check on air freight for *your* products now!

Douglas Aircraft Company, Inc.

Depend on

DOUGLAS



First in Aviation

In the past 5 years
many thousands of businesses
have adopted Hadley
"Write it Once" methods

You too, can SAVE 50% of time spent on ACCOUNTS PAYABLE

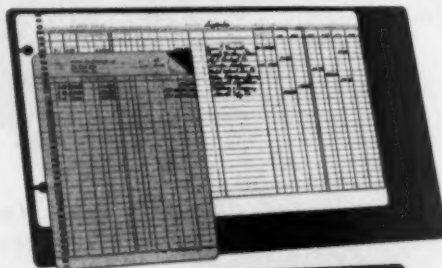
**Write it
Once**



Here is how simple it is to eliminate needless recopying of figures. Standard, punched accounting forms are held in alignment by pegs on a simple collating board. Making the original entry produces duplicate entries as required—all with only one writing. For example, for accounts payable:

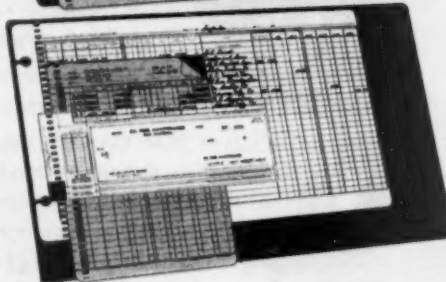
The supplier's ledger sheet is placed over the invoice register form on the collator... then

One writing
creates Invoice
Register as invoice is
entered on Ledger



The same supplier's ledger sheet is placed between check and check register form on the collator... then

One writing
creates Check Record
and completes Ledger
as Check is written



Does your accounts payable system eliminate transcription errors? Does it keep records current? Does it enable you to get checks out on time? Does it enable you to have on your desk today, a complete report on yesterday's accounts payable? *You get all this and more with Hadley "Write it Once."* And you get it immediately... with your present personnel. No expensive equipment to buy... nothing new to learn.

INVESTIGATE NOW! Ask your accountant or write to Hadley for illustrated folder

Hadley © 1953
Established 1909

Manufacturers of standard
loose leaf forms and
"Write it Once" accounting methods
Offices in principal cities
Consult your telephone directory

CHARLES R. HADLEY COMPANY, Dept. 12H
Los Angeles 12: 330 N. Los Angeles St.
New York City 17: 342 Madison Ave.

Please send me illustrated folder on the
"Write it Once" method for ☐ Payroll
☐ Accounts Receivable ☐ Accounts Payable

NAME _____

FIRM _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____

**Write it
Once**

PRODUCTION BRIEFS

A degree in nuclear engineering will be awarded in the future by Kansas State College, Manhattan, Kan. The new course will cover the fundamentals of atomic-energy and radio-tracer techniques, and basic engineering in design, mechanics, and thermodynamics.

A movie screen for every customer is the latest idea for drive-in theaters. Individual, small-sized screens are placed around the circumference of a big circle (up to 600 ft. for 200 cars). A projection booth at the center of the circle flashes the picture to each screen through an arrangement of lenses and reflectors. The system is called Multiscope and was invented by Robert Smith, a sales engineer for National Theatre Supply Co., and his brother, Thomas, an exhibitor at Urbana, Mo.

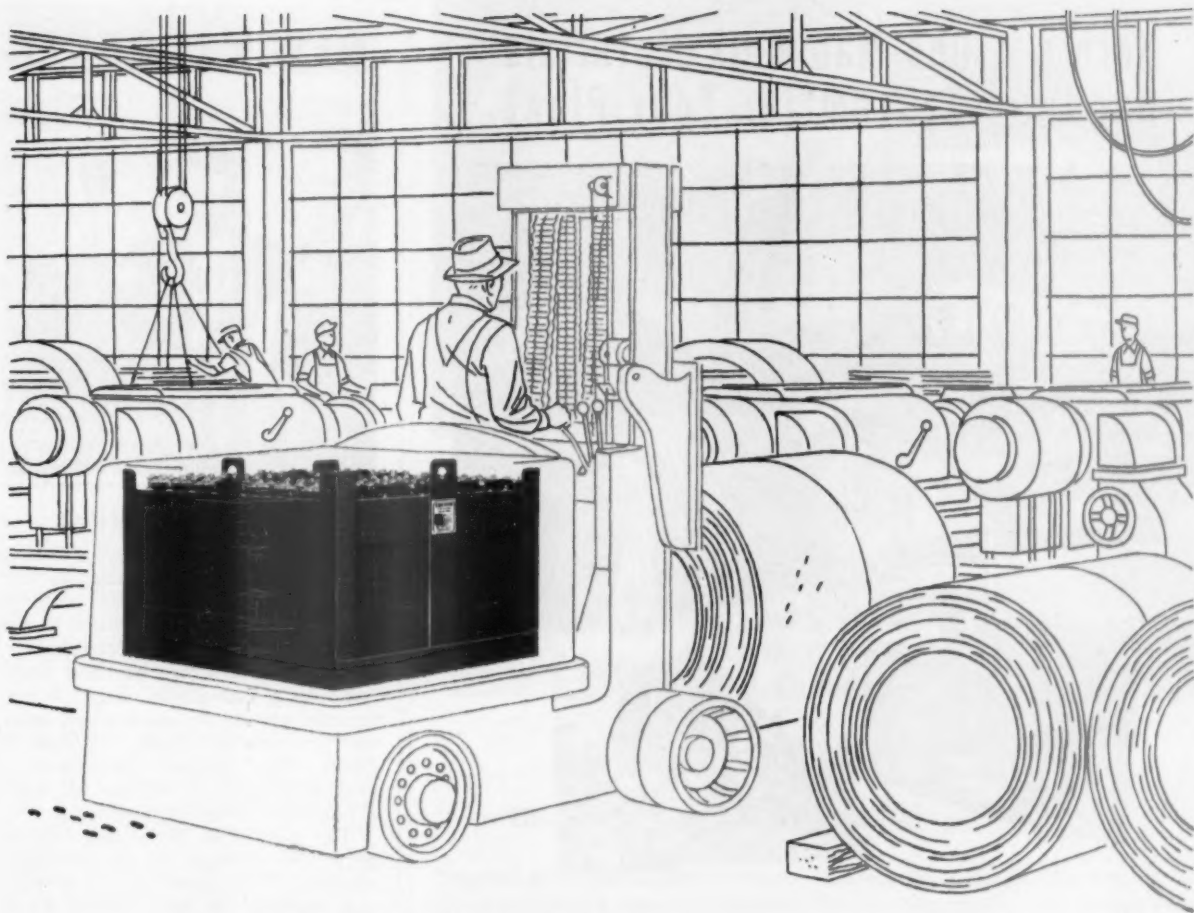
Steel notes: Lukens Steel Co., Coatesville, Pa., plans a \$10.5-million armor-plate plant, with the official O.K. of the Navy Dept.'s Bureau of Ships. . . . Bethlehem Steel Co. anticipated handling problems in making 145-ton, 110-ft. forgings for an aircraft press being built by Loewy Construction Co. So Bethlehem made models of the forgings, one-fifth their actual size, studied them, solved the problems before they arose.

Titanium castings will go into pilot production at National Research Corp., Cambridge, Mass., under a contract with the Army Ordnance Corps. The contract is the first to be awarded a nongovernmental agency for this kind of work.

American Telephone & Telegraph Co. has turned on automatic switching equipment at New Jersey Bell's Newark office that allows long-distance operators to dial directly subscribers in more than 2,000 communities (BW—May 23 '53, p. 62). The equipment will carry about 80% of Newark's out-of-town traffic, and roughly 24,000 calls switched from New York City.

Linde Air Products Co. announced plans to build a new chemical plant near St. Marys, W. Va., to make silicones and silanes. Construction will begin this fall.

Consolidated Vultee Aircraft Corp., moving against competition from British jet transports, plans to convert its piston-powered Model 340 transport to turboprop power. This will up cruising speed from 275 mph. to 335 mph., possibly stretch useful life of the airliner into the 1960s.



Trucks driven hard, 'round-the-clock

need the plus-values in EDISON batteries . . .

EASILY EXCHANGED—QUICKLY RECHARGED—DOUBLY DEPENDABLE

When duty cycles for industrial trucks are longest and toughest, the *extra* advantages of EDISON batteries often become the *most essential*. Then, more than ever, EDISON batteries deliver the greatest value at any price.

In rugged 24-hour truck service, they can be exchanged in two minutes, fully recharged in 6 to 7 hours. They have no finish-rate limitations, require no equalizing. They are easily ventilated, too, if they must work in high temperatures.

In fact, EDISON batteries are so foolproof

electrically that even such accidents as external shorts and reverse charging cannot injure them. Consider, also, their famous steel cell construction, another major reason for their unequalled stamina throughout a useful life two to three times that of other batteries.

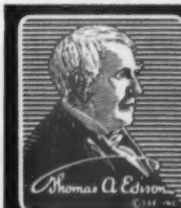
EDISON *plus-values* are more fully covered in our bulletins S.B. 3808 and S.B. 2039. Write for them and the address of your Edison field engineer. Edison Storage Battery Division of Thomas A. Edison, Incorporated, West Orange, N. J.



Most Dependable Power—

Lowest Over-All Cost

. . . you get both with an EDISON



EDISON

Nickel · Iron · Alkaline
STORAGE BATTERIES

Here's a One-Man Bulk Materials Handling System for Your Plant



IN THE Dempster-Dumpster System of bulk materials handling only one man, the driver of the truck-mounted Dempster-Dumpster, is required for operation. The Dempster-Dumpster serves scores of detachable Dempster-Dumpster Containers. Container capacities range up to 4 times that of conventional dump truck bodies and each container is designed to suit the materials to be handled—be they solids, liquids or dust... hot or cold... bulky, light or heavy. You simply place these containers at convenient materials accumulation points inside or outside buildings. When loaded each container is picked up, hauled and emptied (as shown above) or load set down intact. Entire operation is handled by hydraulic controls in cab.

Containers shown below are just a few of the many available or that can be built to meet your needs. They enable you to handle, at tremendous savings, materials of many descriptions—trash and waste materials, raw materials, finished products, etc.—with only one truck and only one man, the driver. Write to us for complete information. Manufactured exclusively by Dempster Brothers, Inc.



One Truck-Mounted
Dempster-Dumpster Handles Scores
of Containers... All Designs... All Sizes

DEMPSTER BROTHERS, 483 Dempster Building, Knoxville 17, Tennessee

NEW PRODUCTS



Low-cost Monitoring

There are a great many ways to keep a continuous record of radio and telephone communications. But most of them require a lot of attention or are prohibitively expensive to operate.

SoundScriber Corp. has now come out with a high-quality magnetic tape recorder-reproducer, which it says monitors at a cost of a penny an hour. It handles two channels simultaneously, runs unattended for 24 hours (48 hours if only one channel is watched).

The machine is 21 in. long, 12½ in. deep, 17½ in. high. It was developed jointly by U. S. Navy Bureau of Ships and engineers of SoundScriber Corp. with emphasis on endurance. About 500 of the recorders have been used during the past year at Naval air stations to monitor air-ground communications. The equipment has just been released for commercial use.

The first commercial users will be the airlines that plan to follow the Navy's lead and use it to keep track of flights. But the manufacturer sees a big future for the recorder in other areas where it's important to know exactly what was said and when. Potential jobs: monitoring radio programs, fire alarms, police calls, and press and court recording.

Key feature of the new equipment is a turntable that contains the recording heads. The table rotates and the heads pass in an arc across a wide (3 in.) slow-moving tape. As one head moves off the front edge of the tape, another picks up the sound on the other edge and draws another arc. The company says the slow speed of the tape gives the machine stability.

Another important feature is its timing accuracy. The tape is marked off in minutes so that the exact time of a message is recorded and intervals between messages, which can be vital when an accident occurs, are figured out to the second. Tapes are marked to begin at midnight, but there is a half-

hour leeway in which the two-minute change of reels can be made.

Messages cannot be altered or erased on the machine, but important items can be cut out for recording elsewhere. An equal length of tape is then pasted into the reel to keep the timing straight. Tape can be erased in a special magnetic device and re-used indefinitely.

• Source: SoundScriber Corp., 146 Munson St., New Haven 4, Conn.

• Price: \$1,395 for two-channel type, \$195 for eraser.

NEW PRODUCTS BRIEFS

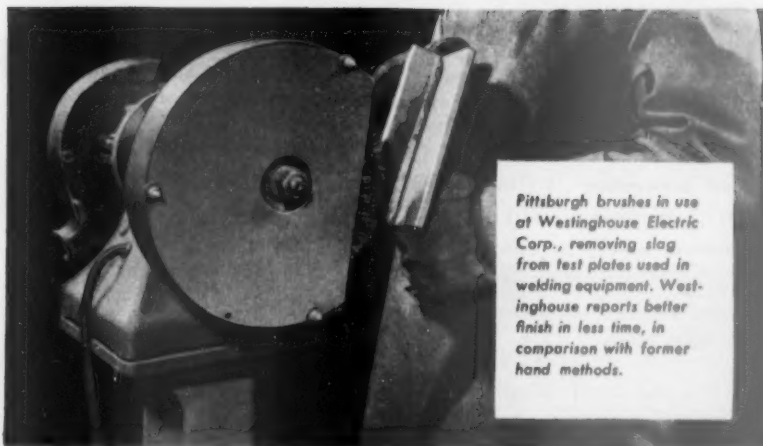
A small diesel engine imported from Germany by Newage International, Inc., 235 E. 42nd St., New York, has stirred considerable interest in the light engine field. Designed to fit on a bicycle, the 11-lb. engine will give a constant output of $\frac{3}{4}$ hp. at 6,000 rpm., get 300 mi. to a gallon of kerosene.

Meter readers will soon be able to check gas consumption outside the house just as they already do for electricity in many places. Sangamo Electric Co., Springfield, Ill., has developed a two-unit instrument. Index dial is mounted outside and connected pneumatically to the meter on the gas line indoors.

Magnesium truck bodies are being produced by White Metal Rolling & Stamping Corp., 80 Moultrie St., Brooklyn 22, N. Y. A 12-ft. van-type body, complete with roof and double back doors, has a capacity of 621 cu. ft., weighs 850 lb. Company says a steel body of the same cubic capacity would weigh about 2,200 lb., aluminum about 1,300 lb.

A fire extinguishing agent, said to be several times as efficient as carbon tetrachloride, is now in full-scale production at Easton Chemicals Division of American Potash & Chemical Corp., 3030 W. 6th St., Los Angeles, Calif. The compound is methylene chlorobromide—generally referred to as CB. Developed in Germany during the war, it's now being used extensively for new types of military aircraft.

Secretaries can now see every word they type by substituting a transparent paper-lock bar for the solid one provided by typewriter manufacturers. Maroth Engineering Co. of Wilton, Conn., which developed the bar to eliminate blind spots for typists, says it's available for practically all makes of typewriters, can be installed in a matter of minutes.



Pittsburgh brushes in use at Westinghouse Electric Corp., removing slag from test plates used in welding equipment. Westinghouse reports better finish in less time, in comparison with former hand methods.

Replace hand finishing with power-driven Pittsburgh Brushes for

Better Cleaning Lower Labor Costs Fewer Rejects

—as these companies did:

Removal of imbedded slag in welding test plates formerly was done by hand at the Westinghouse Electric Corp., Trafford, Pa., using a wire brush and welder's hammer. Pittsburgh brushes, powered by a $\frac{1}{2}$ h.p. motor, now remove more slag in less time, and produce a better finish. In addition, Westinghouse reports their Pittsburgh brushes "stand up better than average in use."

Complete cleaning of dried concrete, rust and scale from steel frames used in concrete forming is essential prior to re-using the forms. Pittsburgh wire brushes were installed at the Universal Form

Clamp Co., Chicago. Working on a conveyor-fed machine, the brushes now remove all foreign material at a rate of 50 pieces per hour, replacing former laborious hand brushing and scraping.

De-scaling preheated bar stock at the Dominion Forge & Stamping Co., Ltd., Canada, was formerly done by hand scraping. This never did a complete job, and inclusions resulted which produced defective forgings. Pittsburgh brushes, on specially-designed machines, now do the job, and have "increased efficiency, decreased the amount of scrap, improved work quality, and saved labor."

WRITE TODAY FOR FREE BOOKLET!

Write for a free copy of our booklet that shows, through actual case histories, how Pittsburgh cuts brushing costs. Address: PITTSBURGH PLATE GLASS COMPANY, Brush Div., Dept. W-1, 3221 Frederick Ave., Baltimore 29, Maryland.



PITTSBURGH



Power Driven

BRUSHES

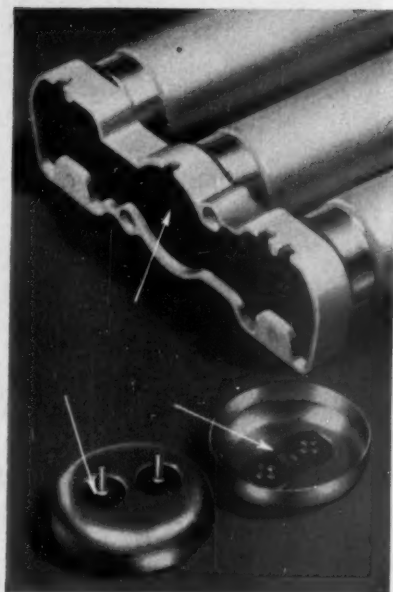
BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

YOU WON'T have to read far either, to find the "WHY." These manufacturers (just as you can) have been able to speed production . . . lower costs . . . improve product performance, simply by combining a good idea with one of the many basic Taylor materials for industry.

And if you are looking for ideas, why not route this to your engineering department after you finish with it? It just might pay off in lower costs for one of your present products . . . or a new one still on the drawing board.



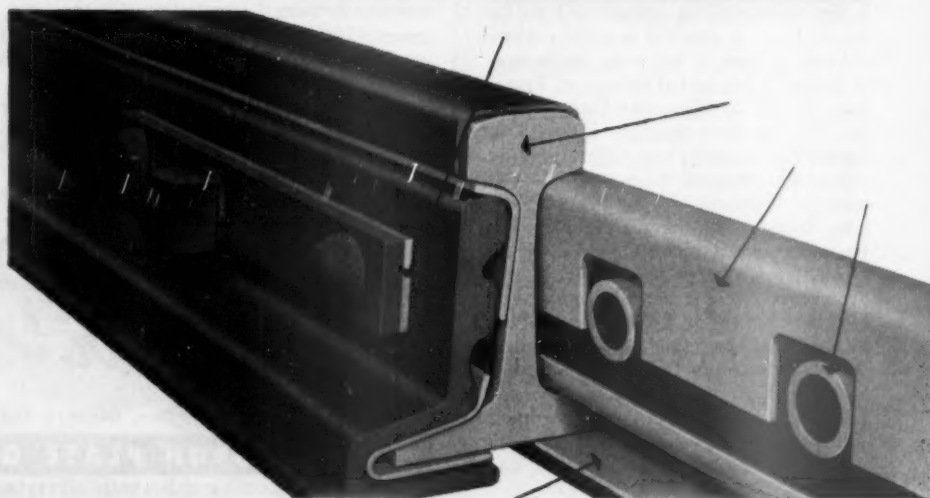
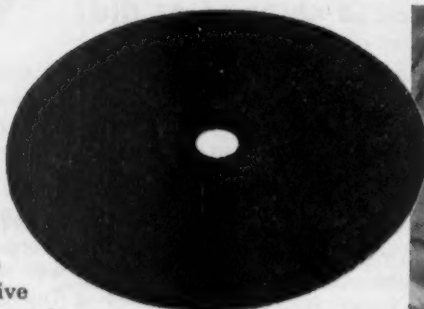
ELECTRICAL INDUSTRY

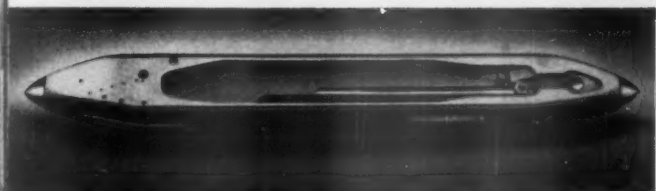
◀ The tube ends of fluorescent lights are an ideal application for Taylor Laminated Plastics. Grade X, a phenolic laminate, has the mechanical strength needed to hold the prongs that fit into the light socket as well as the electrical qualities required to insulate them from the tube end cap. The good punching qualities of Grade X permitted these insulating washers to be turned out at high-speed production. Fluorescent light sockets also use Taylor products. The back plate on the one shown is Taylor Grade XP . . . a hard, strong, dimensionally stable phenolic laminate that is used for hot punching. It machines well and has good electrical characteristics.

Here's why these Industries

ABRASIVES INDUSTRY

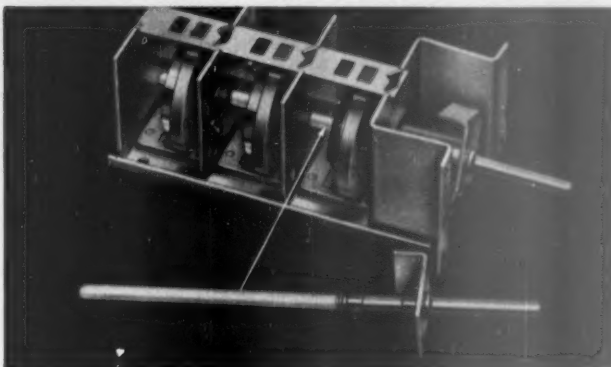
Ask any user and ▶ he will tell you that he wants just two things in his abrasive discs. He wants them to be tough enough to last a long time. And he wants them smooth and flexible for good results. Taylor Abrasive Disc Backing Fibre is extra tough. It has exceptionally high tear strength . . . stands up under severe mechanical stresses of high speed operation. It has just the "right" amount of rigidity for good performance, yet is flexible enough to withstand repeated flexing without failure. Good ply adhesion means long service on the toughest jobs. What's more, Taylor Abrasive Disc Backing has a clean smooth surface. The abrasive goes on evenly . . . glueing properties are excellent.





ELECTRONICS INDUSTRY

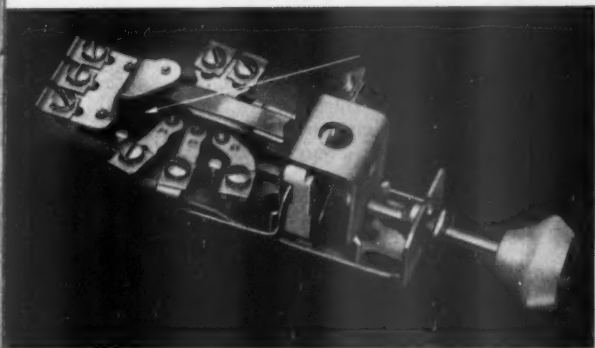
Every time a new material is produced . . . the ► result is invariably lower production costs and better products for many manufacturers . . . just as it was for the manufacturer of this UHF television tuner when he used the new Taylor Polyester Glass Rod for the shaft. This new material has the highest mechanical strength of all laminates in rod form and is fire retardant. It has outstanding dimensional stability and torsional strength . . . characteristics that helped produce a better tuner. In addition, the ability of this rod to remain absolutely straight . . . without bending during shipment or storage . . . materially speeded assembly operations.



TEXTILE INDUSTRY

◄ Shuttles, traveling so fast you can hardly see them, are made of Taylor Shuttle Fibre bonded to a wood core. This fibre has a smooth hard finish that is highly resistant to yarn abrasion. It wears slowly and smoothly . . . with no rough surfaces to snag the yarn. It is light in weight (about half that of aluminum) and machines easily.

use Taylor Fibre and Laminates



AUTOMOTIVE INDUSTRY

▲ When night comes, another Taylor Laminated Plastic goes to work . . . the back plate on a headlight switch. This application called for low moisture absorption and good dielectric strength as well as the mechanical strength to support the switch components. It had to be easy to punch and machine, to keep production costs low. Taylor recommended Grade XP, a paper base laminated plastic. Result: a dependable low cost switch.

RAILROAD INDUSTRY

◄ Taylor Block Joint Insulation combines the extreme toughness and long life required for the tremendous shock and stresses that result from today's high speed railroad operation. Taylor end posts, washers, washer plates, head pieces, base pieces and bushings are fabricated accurately to make installation easy . . . give long life to track and switch rod insulation.

Taylor Vulcanized Fibre and Phenol, Melamine and Silicone Laminates are available in a wide range of physical and mechanical properties that can help your staff in many of their design and production problems. In addition, Taylor engineers are well qualified by experience to assist in selecting the Taylor products that are best suited to your requirements.

Taylor Facilities are geared to meet your production schedules . . . whether you buy raw stocks of sheets, tubes, rolls or rods . . . or specially fabricated parts.

For Your Staff—Factual and informative Taylor advertising is being directed to your engineering and purchasing departments . . . to help them become familiar with the ways Taylor products can help you produce better products . . . at lower costs.

For Your Files—a comprehensive booklet on Taylor materials. Write today. Taylor Fibre Co., Norristown, Pennsylvania — La Verne, California.

Branch offices in Asheville, Boston, Chicago, Cleveland, Dayton, Detroit, Indianapolis, Los Angeles, Milwaukee, New York City, Philadelphia, Pittsburgh, Rochester, St. Louis and Tolland, Connecticut. Distributors in Grand Prairie and Houston, Texas; New Orleans and Los Angeles.

TAYLOR
Laminated Plastics
Vulcanized Fibre



OPEN FOR BUSINESS: Gerald C. Denebrink, vice-president for sales of C. H. Masland & Sons, has reached his goal: He's built an entire sales setup where there was none.



WE STARTED OFF, says Denebrink, with no warehouse, no showroom, not a salesman . . .

Building a

A year ago, C. H. Masland & Sons, carpet manufacturer, hadn't a salesman to its name. Its entire wholesaling operation was handled by Alexander Smith, Inc., big carpet company, which acted as Masland's sales agent.

Today, Masland sells its entire line itself. It has a sales force of 35 men, plus a top echelon of seasoned sales personnel. It has some 1,750 dealers—with new ones coming in. It has a complete eight-man credit department. It has three warehouses in the works. It has three showrooms. It's hip-deep in the business of selling.

• **Techniques**—What Masland's experience indicates is that the techniques of marketing have reached the point where a company that has the will can find the way to build a sales force from the ground up—almost overnight.

"Our experience proves," says Frank E. Masland, Jr., president—and one of the eight Maslands who run the company—"that a mature organization can create a mature sales force."

Once the decision to sell on its own had been made, Masland ran into no major roadblocks. The main questions to solve were questions of strategy: How should it set itself up on its sales legs?

• **Balance**—A lot of ancient history goes into the initial decision to go ahead. When the 87-year-old concern at Carlisle, Pa., teamed up with Alexander Smith in 1938, the agreement made sense. Alexander Smith did a big business in Axminster rugs, the kind that lend themselves to multicolor floral patterns.

Masland didn't make Axminsters. The nearest thing was its Argonne rug, a process developed by Masland for



... My job was to build the best sales force in the industry. That was a year ago, and ...



... At 1953's June opening, we got more than our share of orders. We've been ...

Sales Force from Scratch

weaving and printing, which gave it a solid in on a lower-priced line. Masland did have Wiltons—the weave that is especially good for all-over patterns in monotones. Smith had no Wiltons. The two companies didn't compete.

• **Changes**—Gradually, several things happened. Housewives, who for years had gone for the floral Axminsters, began to hanker for plain colors. More and more people wanted Wiltons. This trend left Smith out in the cold. As a sales agent, it couldn't make Wiltons in competition with Masland.

What's more, by 1952 Masland had diversified to the point where it had a full line. It had Wiltons, Argonnes, velvets, wools, cottons, blends. It even had gone into sportswear, partly to utilize the sewing machines that were a heritage from its wartime stint as manufacturer of duck.

And it had the volume. Between 1939 and 1953 its dollar sales had tripled.

All this growing made it harder to fit the Masland and Smith interests together. Masland began to feel, too, that under the Smith setup its distribution line was spreading too thin. Smith had 19 warehouses, some 150 salesmen. At its peak it had close to 12,000 retailers. Fewer than half that number sold Masland carpets, but even so, Masland felt pinched to service such a broad distribution efficiently and economically.

A clinching argument to go separate ways was that Masland was in danger of losing its corporate identity. In June, 1951, a survey of its retailers brought this point home sharply: A lot of the dealers thought Masland was a branch of Alexander Smith.

• **On Its Mind**—The idea of setting up its own sales force had been on Masland's mind for several years. To close the gap between mill and retail outlet, it began in 1950 to put out the Shuttle, a publication for mill workers and retailers. The company made a point of bringing dealers to Carlisle. That was one good reason, in 1951, for buying a stately stone mansion in Kings Gap, high on a mountain. Masland converted this into a guest house, with a plentiful display of Masland carpets in every room, where dealers, salesmen, the press—any visiting firemen—could get to know the Masland "family."

Finally, the company called in a consulting firm, A. J. Gallagher Associates of New York. It asked Gallagher two questions: Can we? Should we? Gallagher said yes—and Masland started to act. It hired Gerald C. Denebrink (pictures), who had resigned as vice-president for sales of Bigelow-Sanford Carpet Co., told him to get going.

• **A Dream**—Denebrink jumped at the idea. "It was a sales manager's dream," he says. From the very start, he found some advantages in beginning so late in the game. There was a whole industry's history to guide him.

• **Problem**—The first big question was whether to sell direct to retailers, as Smith had done, or to operate through wholesalers. About half the total carpet yardage produced goes through wholesalers; slightly more than half the carpet manufacturers use wholesalers.

To Denebrink and the Maslands there was one overwhelming factor in favor of direct selling. That was the control it gave over retail outlets—a control that Masland, acting through Smith, had never had. Another factor

Complete "Flying Farmer" Runway Lighting Package

Everything you need for

2000-foot land-ing strip, run-way, or taxiway \$600



Includes 18 stake-mounted runway units with clear lens; 12 threshold units with green lens; yellow cones, lenses, lamps, control switch, Penta-treated stakes, 10,000 feet plastic-covered No. 10 copper wire for direct burial.


Now you can make safer landings in darkness, dust, or fog with a dependable, electric-lighted runway system that costs only 30¢ per runway foot for materials.

Install it yourself. Just plow 6-inch furrows for cable, drive stakes for the units, hook up to regular 115-volt AC power. Needs no transformers. Lamps are 15 watt (105 lumens), giving 27 cp output.

This is a highly effective system, made by the makers of the famous Thermal Beam (TM) high-intensity lights for larger airports.

Also available: "Flying Farmer" kits for 2500- and 3000-foot runways. Mail coupon for complete information.

LINE MATERIAL

Airport Lighting 

(A McGraw Electric Company Division) 152

MAIL THIS COUPON

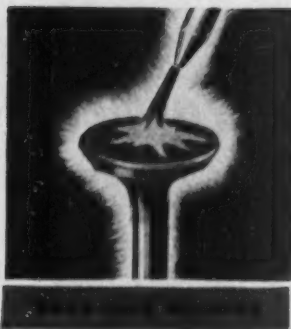
Line Material Co. Airport Lighting BW 83
Division, Milwaukee 1, Wisconsin
Please send me free folder on "Flying Farmer" runway lighting packages.

Name.....

Business.....

Address or
Route.....

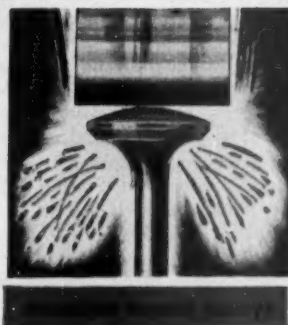
Town.....State.....



**These
facilities
...this
special
know-how**



**...may hold
ideas
YOU
can use
NOW**



Every day the Valve Division is welding thousands of pounds of high-alloy coatings to unusual Thompson-developed alloys to give internal-combustion engine valves added life under super-severe service.

We also insert highly-combustible metallic sodium into hollow valve stems to make engine valves run cooler and last longer.

The Valve Division also knows plenty about forging and finishing extra-tough alloys to precision limits.

If you have out-of-the ordinary production problems, you'll want to know more about Thompson know-how and facilities. And, if you have ideas about how we can help on new projects, we'd like to talk them over with you.

VALVE DIVISION

Thompson Products, Inc.

DEPARTMENT UB-8 • CLEVELAND 17, OHIO



was the probability of a cost advantage. A manufacturer has to guarantee his wholesaler against price fluctuations—often a costly procedure.

• **No. 2**—The second question was on what basis to pick retail outlets. Smith's sales strategy had been the broadside—cover the whole market. Denebrink voted for a selective distribution. He was convinced, and studies of other companies' operations bolstered his conviction, that fewer outlets, hand-picked, could bring the same volume as a more diffuse distribution. In effect, a dealer would have a franchise.

This strategy would make the Masland line count more to the retailer who carried it. And it could mean less drain on the exchequer. The Maslands believe that they can shave at least 2½% off selling costs.

Company officials disclaim any idea of throwing out any single type of outlet, though. The industrywide trend has been away from department stores to furniture and specialty stores.

Masland is out for all types—if the dealer is a good one. Its products cover pretty much the price range in carpet—from about \$4.95 per sq. yd. at retail to \$24.95. Denebrink figures perhaps a department store and specialty shop in one area might fill the bill; another place it might be a furniture store and department store.

• **Geography**—The third big question was to mark out the sales map. Here again, Masland thinks, their experience helped them avoid a pitfall: the temptation to spread themselves too thin.

That's why the company elected to break up the country into six districts instead of the 17 they first planned. "We can always add," Denebrink says. "It might not be so easy to cut down if we started too big."

He kept his eye on this objective—keeping reasonable limits on his project—in figuring out the number of salesmen needed within a district.

• **Men**—Meanwhile, the man hunt was on. This, problem No. 4, was crucial. "My job was to pick the best sales force there was," Denebrink says.

Here, the late start gave Masland a big lift. With their eyes set on a June, 1953, deadline, when the Chicago home furnishings show opened, there was no time to train raw hands. And there was no need. Men who knew the business from top to toe were available—men who liked the idea of starting out with a clean slate.

Some sales training was in the cards, of course. For this, the company hired a sales training manager, made the most of its guest house at Kings Gap to train its 35 salesmen.

• **Plant**—Problem No. 5 was the physical plant. Masland had no warehouses—except at Carlisle—and it had no showrooms. Past experience had con-

vinced it that too many warehouses were expensive to handle. On the other hand, freight rates were too high to use just one. The company settled on three: in Chicago, San Francisco, and Dallas.

Strategic points for showrooms were easy to pick—in the big home furnishings markets. New York City, got the main showroom and sales headquarters. The others are in Chicago and San Francisco.

For the first time in its history, too, Masland needed a credit department. The company worked with Remington Rand on this.

• **Personality**—Finally, there was the all-important business of building up a corporate personality. Here, developing the “family” feeling seemed to be a natural. Four generations of Maslands had borne down heavily on this

theme. Masland mill workers are “associates,” not employees. Masland has had a plantwide profit-sharing plan for some years. It has never had a union, and no real labor trouble. The idea is to cover the retailers, too, with the broad family wing.

The company publication, the Shuttle—and an expanded public relations department—help. So does advertising. Ad agency Anderson & Cairns, Inc., keynotes the family idea in its current campaign.

The heavy advertising this year aims at the trade. The retailer is clearly a key in any personality a corporation has.

• **Test**—The final test of all the hectic months of planning was the Chicago show. The payoff there was the dealers’ response. “Everyone came to see us,” says Denebrink, “and we got more than our share of orders.”

Army PX's Win a Round

House committee blocks retailers' jab at armed forces exchanges, but they land other blows . . . Selling abroad U. S. style.

Retailers' efforts to check the burgeoning competition of discount selling by armed service organizations and other federal employees are making progress on two fronts. But the drive has ground to a temporary halt in another area.

• **PX's**—Last week a Congressional committee summarily dismissed demands of the American Retail Federation to restrict activities of military exchanges. Retailers, particularly jewelers, haberdashers, and hardware merchants, have been trying to get such restrictions since the close of World War II, charging that servicemen were buying everything from automobiles to watches at wholesale prices through exchanges, and selling them to civilians at less than general retail rates.

In 1949 Congress uncovered enough such abuses to crack down hard on the exchanges. They were forced to cut down on the number of items they sold and to adopt strict regulations designed to keep merchandise out of the hands of civilians (BW—Mar. 10 '51, p. 92). In addition, exchanges were forced to pay federal excise taxes, earn enough to pay rent, salaries of employees, utility bills, and other costs. Exchange prices rose.

But retailers were still not happy. This year they demanded that Congress bar the exchanges from handling all luxury items.

An investigating committee, headed by Rep. William Hess of Ohio, an ex-serviceman, turned thumbs down to

the ARF appeal. True, the committee reported, there are some violations of exchange regulations, but these have not been found in significant numbers. Reduction of exchange stocks along lines recommended by ARF would put the service stores out of business. Anyhow, the exchanges are vital to the morale of servicemen, constitute one of their few remaining extra privileges.

The slapdown delivered ARF undoubtedly means the 180 main exchanges and 64 Navy stores will continue in business—at least for the present.

• **Commissaries**—Meanwhile, Defense Secretary Charles E. Wilson has been taking a look at military commissary stores to ascertain whether any are operating in areas adequately served by private concerns. This battle is being spearheaded by such groups as the National Assn. of Food Chains, which points to cities like Washington, where six commissaries are operating within shouting distance of large private markets. Secretary Wilson has until Dec. 31 to certify those that are necessary to assure military personnel of adequate service at reasonable cost. Betting is that a number of the 208 Army, Navy, and Air Force commissaries in the continental U. S. will be shut down as a result.

• **Discount Groups**—Washington merchants scored what appeared to be another victory against discount groups formed by government employees

Blue Ribbon
SUPERSTANDARD GUMMED TAPE



Pepsodent seals shipments with Blue Ribbon Tape

Pepsodent chooses strong, fast-acting Blue Ribbon Superstandard Gummed Tape to guard shipments of their famous products.

Whether your firm is big—like Pepsodent—or small, you can increase your packing output and reduce your costs by using Blue Ribbon Superstandard Gummed Tape.

Time studies show that Blue Ribbon tape saves an average of 12 seconds sealing labor per carton, over competitive tapes. Within a month, this adds up to important man hour savings for your plant.

Blue Ribbon's faster sealing action is saving many companies up to 15% in taping costs. It can do the same for your company. Our booklet shows you how.

SEND TODAY for a free copy of "How to cut costs in your shipping room"

Send me without obligation a free copy of this helpful booklet on packaging procedures that can save us money.



NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

HUDSON PULP & PAPER CORP.
Dept. 99, 505 Park Ave., New York 22, N.Y.



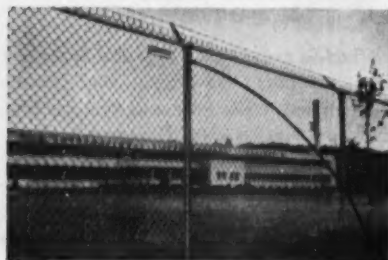
Mercury

YAK Sit down, center control fork truck. 4000 lbs. capacity.

430

A major advance in fork truck design. Mercury "Yak" 430 incorporates . . . higher maximum fork elevation • increased free lift • greater speed • lighter chassis weight • shorter turning radius • simple low pressure hydraulic hoist system • new unit drive with quick detachable motor and self-centering hydraulic brakes • new compensating castor type steering axle • Timken duo-grip parking brake actuated by driver's seat. Write for Bulletin 430.

MERCURY MANUFACTURING CO.
4146 South Halsted Street, Chicago 9, Illinois



**The line between Production
and Destruction**

often **CARRIES THIS**

FAMOUS SIGN **ANCHOR FENCE**

Anchor Fence provides a sure way to guard your production—your plant, equipment, vehicles and employees—against destruction by thieves, vandals and agitators.

But be sure to look for the orange-and-black plate that identifies all genuine Anchor Fence. It's your assurance of the finest in industrial fencing.

WRITE for Anchor's fact-packed catalog to: **ANCHOR POST PRODUCTS, INC.**, 6098 Eastern Avenue, Baltimore 24, Md.

Anchor Fence

Division of ANCHOR POST PRODUCTS, INC.

(mostly civilians) in the nation's capital. The retailers won a promise from Commerce Secretary Sinclair Weeks to crack down on the discount ventures. And the Justice Dept. is studying the case to see if merchants giving discounts to federal workers may be violating the Robinson-Patman Act of 1946.

The Washington battle was stirred up by the District of Columbia Business Practices Council, a group of more than 100 retailers. The council estimates there are some 150 organizations of federal employees that offer their members discounts on everything from appliances to zithers. Two groups own retail outlets.

The organizations include federal credit unions, which are authorized by law to extend reasonable credit to federal workers, as well as social and athletic clubs. Some have no function other than to obtain discounts.

The government can probably stop most of these ventures because they solicit members and keep records and catalogs on federal premises. The Business Practices Council also has submitted a legal opinion to Secretary Weeks, holding that merchants giving discounts to such groups violate the Robinson-Patman Act provisions barring discriminatory selling.

If Washington merchants win their fight to eliminate discount buying for government employees, you can look for similar action by retailers in cities like Denver and San Diego, where there are smaller but still sizable concentrations of federal workers.

Worldwide Cheesecake

Selling in foreign markets is virtually the same as selling in Boston or in Boise, Idaho. That's the contention of Will C. Grant, president of Grant Advertising, Inc.

Speaking at a conference on world opportunities for American business, held last week in New York City, Grant took direct aim at the old American dogma that psyches and minds are different abroad, and that pressure selling, advertising jingles, and cheesecake simply don't pull in the pesos, the lire, and the francs. He said, "It's a mistaken notion that selling to the 2,220,000,000 people abroad is different than selling to the 160,000,000 at home."

The admen from Grant then proceeded to demonstrate how they are selling American products abroad. Basically, the agency's technique is this: (1) At the head of each of its 17 foreign branches, it places either local men or men who have long experience in the country; (2) it employs proven American mass-selling methods, altered only to fit local ground rules.

One of these methods is the radio

commercial jingle. Spectators at the conference were startled to hear a recording of a commercial used in the Philippines: The tune was familiar to all radio listeners, and so was an occasional interjection of "Halo Shampoo, Halo." But the rest of the jingle was in Tagalog.

Films for television commercials used abroad were also demonstrated. Time-honored American traditions—cheesecake and romance—are used throughout. Grant says that a lovely model, somehow looking both contented and sophisticated, and blowing an even stream of cigarette smoke at a TV camera, gives people a nice feeling about cigarettes in Sao Paulo or in Mexico City, just as it does in Chicago.

MARKETING BRIEFS

Used-car dealers are approaching the try-anything stage to get sales out of the dumps. In Dallas, one dealer, heavy with inventory, is offering 200 gal. of free gas with cars selling for over \$1,100, 100 gal. with \$500 to \$1,100 second-hands. Also thrown in: one year's free servicing.

Cigarette taxes, imposed by 31 states seven years ago, have spread to 10 more. No new states were added this year, but Delaware and Iowa boosted their levies, others extended "temporary" taxes. . . . Texas has ordered a crack-down on mail-order tax-free cigarettes, mostly shipped in from Kentucky.

Fair trade showdown: Schwegmann Bros., New Orleans' supermarket and tireless opponent of fair trade laws, has appealed to the U.S. Supreme Court, asking it to nullify the two-year-old McGuire Fair Trade Act insofar as it imposes price fixing on nonsigners. The court will probably decide by midfall whether to hear the appeal or to uphold lower-court decisions.

Decentralized kitchen ranges have gained an added starter in the Thor Corp., now marketing a built-in range with an eye-level oven and surface burners that can be installed elsewhere in the kitchen. Thor joins Roper, Chambers, and others in pushing the split-up stove idea.

Home workshops, which are selling at an estimated rate of \$200-million a year, may soon be added to the appliance dealer's line. A survey by Electrical Merchandising (a McGraw-Hill publication) finds that most major power tool makers think appliance dealers are ideally equipped to sell the home shops. Manufacturers feel they have a \$500-million-a-year potential.

A More Accurate, Easier-to-Run Filing System

yet cut your filing costs **75%**

Although its cost is approximately one-half that of conventional filing equipment, *one double-face 7'-3" high VMP steel Vertical File has the same filing inch capacity as five four-drawer letter files.* Up to 40% savings in floor space can be obtained by using this method.

You achieve faster service, both filing and withdrawing. Every folder is instantly visible in its place on the shelf, easy to find, easy to replace! Misfiles are virtually eliminated.



Folders within easy reach, easy to find, to replace.

Faster service, increased filing accuracy.

Special table-like shelf rolls out for checking purposes.

VMP VERTICAL FILES

The compact, library-like arrangement of VMP Vertical Files cuts down unproductive walking time. Substantially fewer clerks are required. Clerks themselves like VMP Vertical Files, prefer them to cabinet files or any other filing method. That means less fatigue, higher morale.

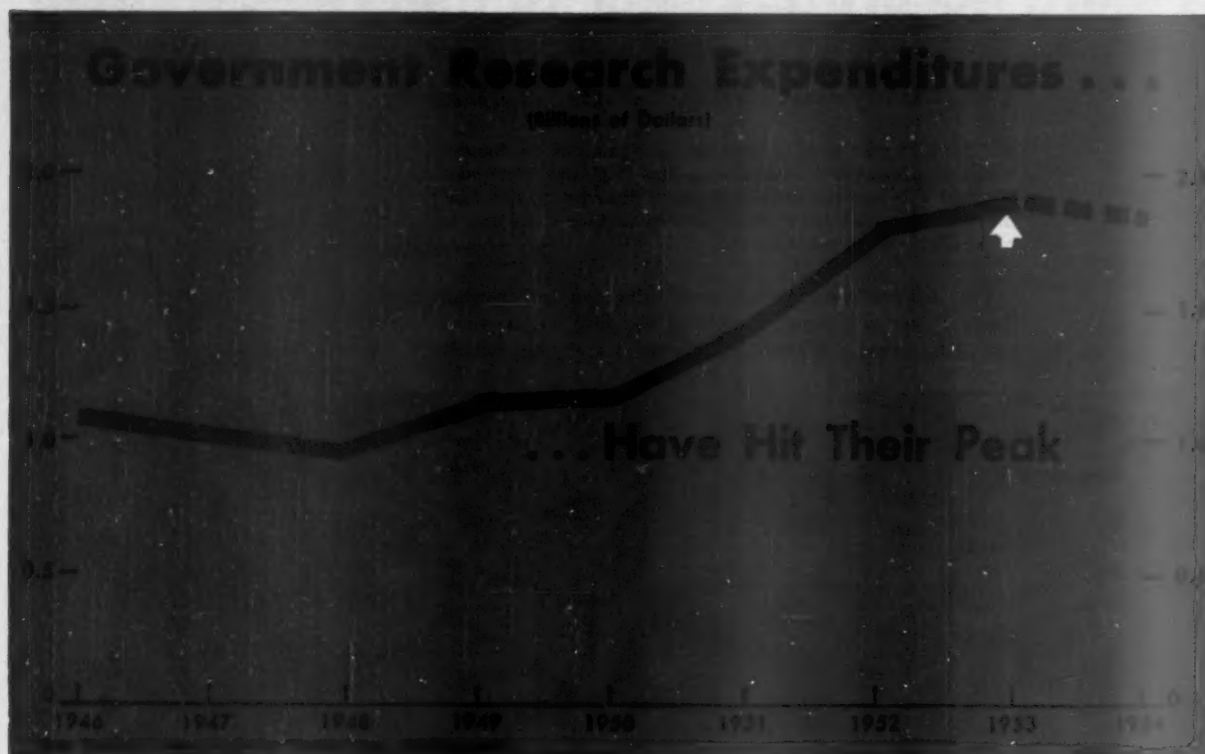
FREE: Two-color VMP Vertical File brochure details substantial advantages secured in space saving and original costs. Write Virginia Metal Products, Inc., Department BW-8, 1107 First National Bank Building, Pittsburgh 22, Pa.



VIRGINIA METAL PRODUCTS, INC. ORANGE, VIRGINIA

also manufacturers of MOBILWALLS — the most complete line of movable steel partitions — steel doors and frames, library stacks and equipment, and Industrial and Institutional Conveyors.

RESEARCH



THE NEW TREND IS:

Cutbacks, Bigger Civilian Role

Ever since World War II, the share of the government in the nation's research has been getting bigger and bigger. And the military departments have been bossing a growing part of these federal research expenditures.

But this year there's a reversal in both these trends.

- Pressures on the federal budget are forcing the government to slow down on expenditures for research (chart above). The tightening up will compel abandonment of some planned projects not considered critical.

- And it's an Eisenhower Administration policy to put more control of research in civilian hands where practicable. This means a bigger role in fundamental or basic research for the civilian-controlled National Science Foundation, set up in 1950.

- **Lion's Share**—The government itself doesn't furnish an over-all total on its research spending. But best available figures indicate that the government's share of the country's expenditure for

research and development now comes to about 56% of the whole.

That's on the basis of the National Science Foundation's estimate that the federal government spent nearly \$2-billion for research and development in the fiscal year just ended. Estimates of the nation's total expenditure are on a calendar year basis, with the figure put at about \$3.5-billion for 1952.

To see how the government's share has risen, let's take a look five years back, before the chart line started climbing. In fiscal 1948, the government spent for research and development something less than \$1-billion—roughly one-half the 1953 figure. The government's share at that time came to about 44% of the national total, compared with the recent 56%—but still, of course, way above prewar.

- **Farming Out**—The share of industry and of universities and other nonprofit institutions in the actual research, however, is somewhat larger than these figures indicate. For, while the govern-

ment pays the bill to the tune of nearly \$2-billion, the biggest slice of the actual research is done under contract by industry or private institutions.

To be precise about the matter, government agencies and departments are doing about 45% of the research the government pays for, industry about 41%, and universities about 14%.

- **Cutting Down**—Even with the budget cutbacks, the government's part in the research picture will still be a pretty big one. The government expenditures will probably remain between \$1.8-billion and \$1.9-billion in the next year. The cuts will come not only from eliminating some noncritical projects but from curtailing expansion in research facilities, which has been taking large annual capital expenditures.

- **Transferring**—In the Eisenhower Administration setup, department and agency research bodies will retain control of applied research and product development projects, but much of the fundamental or basic research is to be

transferred to the National Science Foundation.

While NSF will take control over much of the basic research, it will not get all of it. The Defense Dept., for instance, expects to keep the basic research most directly connected with defense. Other groups, like the Office of Naval Research and Atomic Energy Commission, will keep projects in their special areas.

But NSF will get all the general research in biology, mathematics, astronomy, earth sciences and the like—such studies as the “basic biology of marine organisms” or “motions of stars” or “differences among races and varieties of higher plants.” And it will keep tabs on all basic research, even that done by other government departments.

• **More Scope**—This will give NSF the biggest job it's done to date. So far, it hasn't been given much of the job of handling and coordinating fundamental research for which it was established. Congress, in setting it up, limited NSF's budget to a maximum of \$15-million in a year. Since the government's basic research expenditures are much higher than that, that law effectively prevented NSF from taking over the major part of its task.

So NSF complained about this limit. The Eisenhower Administration backed it up, and Congress, just before adjournment, rushed through a bill that eliminates the ceiling.

Even at that, NSF won't get right away all the work that may eventually fall to it. A very thorough study is necessary to separate fundamental from applied research, and to decide which projects are not of direct concern to a specific agency. So NSF will still spend only about \$8-million during fiscal year 1954.

• **Real Role**—That's a very small sum in comparison to total government research expenditures, and might make you think NSF's role is still minor. But the figure doesn't tell the whole story, because the over-all amount of nearly \$2-billion does not differentiate between research and development. Most of it goes for development, and the largest slice of what is slated for research goes to applied research.

Basic research, in fact, accounts for less than one-fifth of the money the government spends for research and development.

So actually NSF will have a good hunk of what industry would consider to be real research, and will get more as time goes on. In addition, it will keep track of what other agencies spend in basic research.

• **Letting Go**—But the foundation won't have anything to do with the applied research and development costs. And the Eisenhower Administration seems to be letting go of the main administrative tools it had for keeping track of money spent in these areas.

The over-all study of government research made in 1946 and 1947 by the Scientific Research Board (BW—Sep. 6 '47, p.20) recommended the establishment of NSF. It also proposed an Interdepartmental Committee for Scientific Research and Development to set general policies, prevent overlapping, and see that a balance was maintained among the fields of research.

President Truman thought enough of the interdepartmental committee idea to establish it within a few months after receiving the proposal. Since the directors of research in 14 departments and agencies sat on the committee, it furnished a central clearinghouse of information.

Following up another recommendation of the Scientific Research Board, President Truman designated John R. Steelman as liaison between the committee and the White House.

So far the Eisenhower Administration has done nothing about these two means of liaison between agencies doing research and the President.

• **Future Fate**—That leaves the fate of many projects wholly to the discretion of the appointive head of the agency, who may have little or no real scientific understanding of the projects.

Secretary of Defense Wilson has expressed his ideas on projects such as the one to study why potatoes turn brown when they are fried (BW—Jun. 27 '53, p.165). That's one that does sound like boondoggling, and his aides insist Wilson is not opposed to Defense Dept. research, but simply wants to keep only those projects that actually pertain to defense.

But if a department head does want to rule out a project that research men see a real need for, most of the liaison machinery through which the research men might make themselves heard seems to have been shelved.

• **Extent**—Most government agencies are involved in some way with research; but the Defense Dept. and the Atomic Energy Commission have the largest research and development budgets.

It's the new Dept. of Health, Education & Welfare, however, that shows the biggest budget cut—mostly in capital expenditures. That's because new research centers built for the former Federal Security Agency, largely for medical research, have been finished or nearly so.

allwood*

hardboard

for
designing men

• ALLWOOD'S ready workability makes it a versatile and easy-to-use material for store displays, stage and TV sets, decorative interiors, contemporary furniture, distinctive show windows and unusual display boards. Check on ALLWOOD for your designs with Simpson Logging Co., Seattle, Washington, national sales agents for ALLWOOD.



OREGON
LUMBER
COMPANY

BAKER, OREGON

*Trademark Oregon Lumber Co.

YOUR OWN BUILDING COULD BE "FALLING APART"

Only close inspection will show whether driving penetrating rain and severe weather have been corroding metal, disintegrating brick and mortar, destroying plaster and interior decoration.

Check up for yourself or let our trained field engineers check up for you. 25 critical (some hidden) places must be closely inspected.

50,000,000 square feet of structural surface have been protected by Horn materials and methods. Our "Know how" can easily save you thousands of dollars. And remember you can handle remedial water-proofing work as maintenance expense yet increase your actual building valuation.

OUR SERVICE CONSISTS OF

- Technical surveys
- Experienced crews
- HORN materials
- Guaranteed results
- National operations
- Nationally known references.



Typical buildings restored by our methods.

HORN

HEADQUARTERS FOR BUILDING RESTORATION REMEDIAL WATERPROOFING

FREE!

Get the Horn "Check-Up" Chart for the use of Building Owners, Building Managers, Architects, Engineers, Supts. of Maintenance.

CONTRACTING DIVISION

DW53

A. C. HORN CORPORATION, Long Island City 1, N. Y.

- ☐ Please send me free the Horn "Check-Up" Chart to help locate damaged structural areas in our buildings.
- ☐ Send your field engineer to make a Horn inspection.

Name _____

Address _____

City _____ State _____

IT'S CHEAPER TO REPAIR THAN TO REPLACE.



NAVY LAB at San Diego keeps electronics supplies on open counters. It's . . .

Self-Service for Scientists

Researchers can browse around in quest of parts they need. It saves a lot of catalog leafing and delay.

Scientists in the Naval Electronics Laboratory at San Diego used to waste a lot of time leafing through catalogs for parts. But not any more; the Navy licked the problem by setting up a self-service stock room. The scientist can see at a glance whether the gadget he needs is on the counters. If it is, he takes it with him, signing a requisition on the way out.

The system is even more helpful when the scientist has a general idea of what he needs, but isn't sure what it is called, or even whether it exists. In the old days he spent hours at the catalogs, fumbling round like a do-it-yourself homeowner in a hardware store.

• **Browsing Around**—The new system works rather like the stack privilege in a library, when a researcher is allowed to browse in the stacks instead of wrestling with indexes and red tape. Suppose a scientist wants an electronic part of a certain size, equipped with certain connections. He can go directly to the counter where such parts are on display. If he can't find his heart's desire, he can see if there are any substitutes that might do.

NEL has gone a step further in its care and feeding of scientists. To ease the requisition problem it has set up a purely local four-figure code that parallels the immensely complicated code

used by the Navy as a whole. Thus Dr. X, having found what he wants, makes out a slip for #4578. He's much more likely to get that straight than if he had to fill in the regular Navy designation that might be something like N16-R-135-67-37000. Now NEL uses the long code only in ordering replenishments for its stock.

• **Manpower Saving**—The laboratory figures that under ordinary supply conditions it would take 30 clerks to keep track of the 10,000 types of parts, and to service the more-than-100 daily customers. In the self-service stock room, three girls handle stock, and three keep the records.

Lt. Cmdr. F. W. Hardacre, in charge, also likes the fact that the department has a more accurate check on which parts are used widely and which rarely. Each evening the girls check up as they replenish the self-service bins. If a part stays on the counter more than six weeks, it is eliminated to save space.

NEL's fear that parts would be taken without requisitions has proved groundless. Out of more than \$250,000 stock taken out last year, requisitions appeared for \$8,561.16 worth that weren't actually taken. Only \$5,227.85 worth were taken without requisitions. NEL blames both overage and loss on ordinary errors.



The Man Who Could Always Scare Up Business

They didn't come much shrewder than this Southern Nigerian, who processed a mixture of sacrificial blood, magic bark and mumbo-jumbo—then told customers *they* were wrong when his pots and kettles didn't produce the cure.

But who's wrong when the "pots and kettles" fail in *your* process? When shut-downs scuttle schedules? When profits *pause* for hurried repairs to *your* tanks, kettles, pressure vessels? Fortunately, there's a way to plan away trouble. That's by getting the soundest tank and pressure vessel fabrication to begin with.

There are qualified fabricators—specializing in your field—with both the resources and knowledge to build equipment to fit your exact needs. Their engineering staffs collaborate with yours, work with your consultants and consult materials suppliers. It's this teamwork in planning—together with the abilities of the qualified fabricator—that assures you the attention of specialists to each phase of your equipment installation. Look for this co-ordination to insure the profitable return that you have every right to expect.

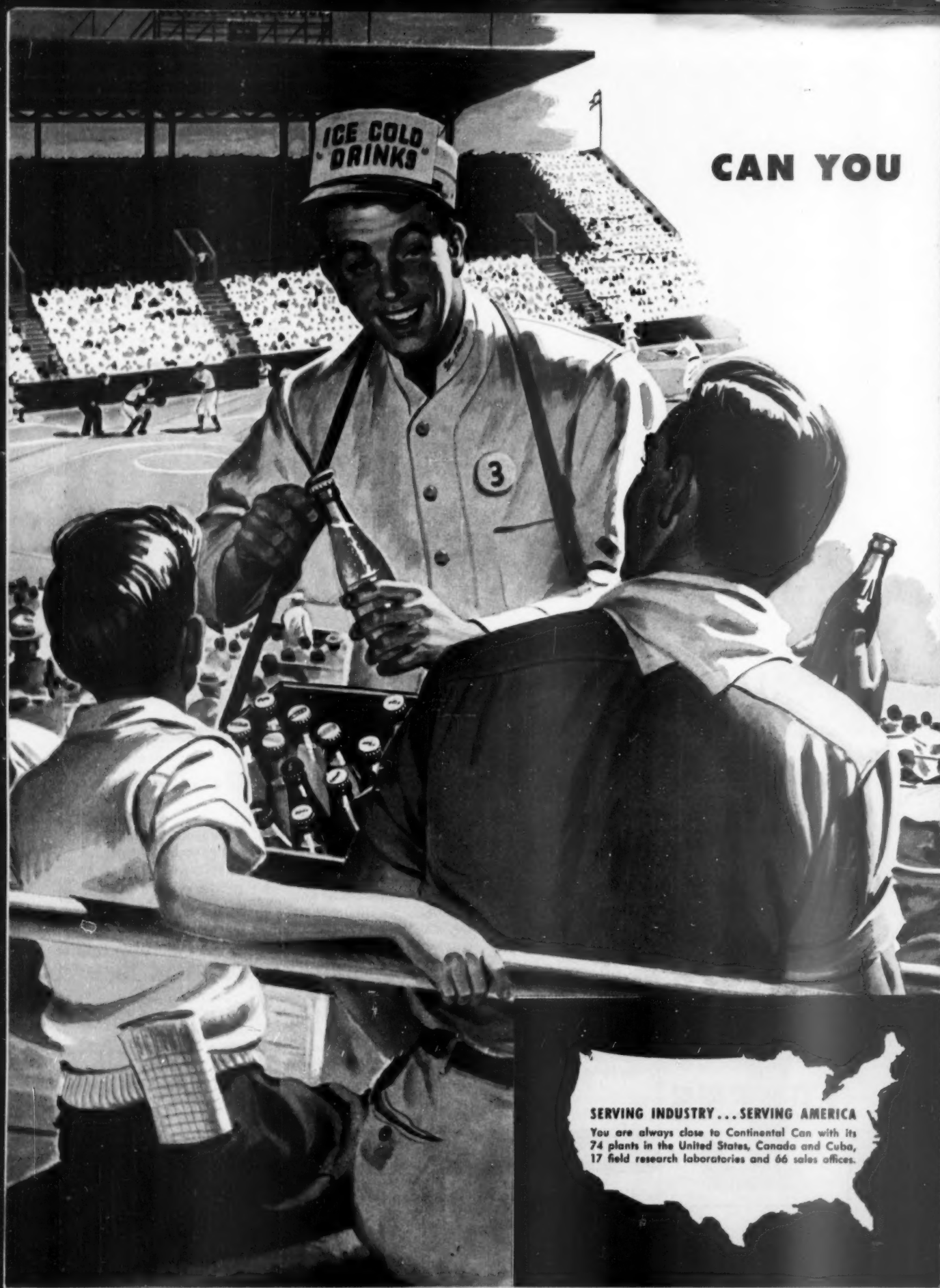


Early in your planning of new process equipment, it will pay you to discuss your needs with your fabricator. Or, for the names of qualified equipment builders who are experienced in your field, contact us. As a materials supplier for over 140 years, Lukens knows fabricators. Address Manager, Marketing Service, 483 Lukens Building, Coatesville, Pennsylvania.

World's Leading Producer of

SPECIALTY STEEL PLATE • PLATE SHAPES • HEADS • CLAD STEELS

LUKENS STEEL COMPANY, COATESVILLE, PA.



CAN YOU

SERVING INDUSTRY...SERVING AMERICA

You are always close to Continental Can with its 74 plants in the United States, Canada and Cuba, 17 field research laboratories and 66 sales offices.

FIND THE ENGINEERING TRIUMPH IN THIS PICTURE?

It's a tiny piece of metal and cork that costs only a fraction of a cent . . . the cap on a soft-drink bottle. This cap must seal in more than the flavor. It must also hold the carbonating gas, which may be under as much as 100 pounds pressure.

The first metal crowns appeared in this country about sixty years ago. While they represented a tremendous advance over previous sealing methods, soft drinks would still occasionally go "flat." It was not until crowns had been thoroughly engineered to find just the right thickness of metal, the right composition of cork, and the right adhesive, that they became completely reliable.

In this development Continental research people played an important part. The five plants of our Bond Crown & Cork Co. division now turn out a big share of the more than 50 billion crowns the U. S. bottling industry uses annually.

Like other Continental products, Bond crowns are being constantly improved. Our scientists, engineers and technicians are everlastingly at their studies, in our laboratories and in our customers' plants. In the past few years we have found nearly a dozen ways to make crowns better-looking, better-sealing and more corrosion-resistant.

Bond crowns wear our Triple C trade-mark on their skirt. To our customers this little emblem means progressive improvement in crown quality and service.



CONTINENTAL

CONTINENTAL CAN BUILDING

CAN COMPANY

100 E. 42nd ST., NEW YORK 17, N. Y.

CONTINENTAL CAN COMPANY OF CANADA LIMITED, MONTREAL



TIN CANS



PAPER DRUMS



PAPER CONTAINERS



CAPS AND CORK



STEEL PAILS AND DRUMS



BAGS



CROCKWARE



Composite color-photo, showing type of acoustical ceiling used in Naval Ordnance Plant, Pomona, Calif., operated by Pomona Division of Consolidated Vultee Aircraft Corp. to build guided missiles.

Talk about Noise Reduction!

You Hear the Difference with New, Low-Cost Reynolds Aluminum Acoustical System

Another first for Reynolds...highest noise reduction in *any* industrial, commercial or institutional area! It's a ceiling of large, perforated aluminum panels, attractively formed, in natural or baked-enamel finish...backed by sound-absorbent material. Any panel movable for access to utilities. High-speed installation...minimum work interruption. Here's overhead beauty that's maintenance-free...rustproof and light-reflective. Underwriters' Laboratories ap-

proved. Readily adaptable to air-conditioning...with high thermal insulation that cuts cooling and heating costs. And low in cost...because aluminum is priced no higher today than before World War II. *Your dollars are still worth 100¢ in aluminum!* Write for literature and name of nearest franchised applicator.

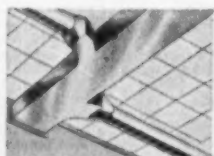
Reynolds Metals Company,
General Sales Office, Louisville 1, Kentucky.

"Send Another CARE Package Overseas Today!"

YOUR DOLLARS ARE STILL WORTH 100 CENTS IN ALUMINUM!



Aluminum Combination Doors! Rustproof, with aluminum hardware, thresholds, weather-strip.



Aluminum Heating and Ventilating Ducts reduce transmission loss, save labor, last indefinitely.



Aluminum Windows can save their total first cost in painting expense. Modern beauty, too!

"MR. PEEPERS" returns September 13th on NBC-TV



REYNOLDS ALUMINUM

RESEARCH BRIEFS

Radioactive hormones are being offered free of charge by the Endocrinology Study Section, National Institute of Health, for research into treatment of arthritis, cancer, and other metabolic diseases. The hormones became available when Charles E. Frosst & Co., aided by Upjohn Co., finally succeeded in labeling the hormones—cortisone and hydrocortisone—with radioactive carbon-14.

Electromagnetism is the basis of the universe, according to Dr. Vaclav Hlavaty of the Graduate Institute for Applied Mathematics of Indiana University. Prof. Hlavaty has been working with Albert Einstein's latest Unified Field Theory, but has taken the research one step further. The significance of Dr. Hlavaty's work is that it may permit the setting up of experiments to test Einstein's theory.

Gamma globulin's effectiveness in combating poliomyelitis will be studied under a nationwide research program announced by the Public Health Service. The main purpose of the study is to determine to what extent the gamma globulin can reduce the severity of paralysis in persons who contract the disease despite inoculation.

The military research and development, chiefly in ordnance and electronics, that has been done at the National Bureau of Standards of the Commerce Dept. is being transferred to the Defense Dept. Until Defense finds room for them, however, the work will still remain physically at NBS laboratories. Transfer of four divisions from NBS to Defense is recognition that NBS has been doing work it was not set up to handle.

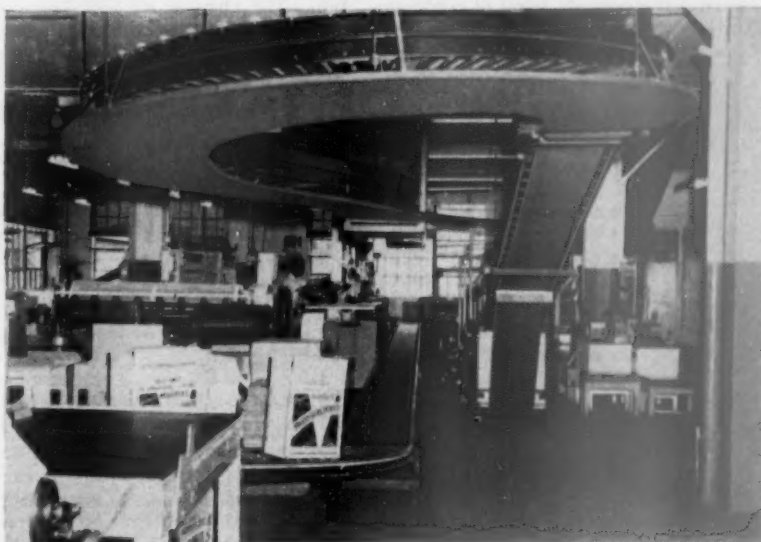
Two major corporations and a large research institute have announced plans for new research laboratories. Monsanto Chemical Co. will build a four-story engineering research laboratory at its Nitro (W. Va.) plant. . . . United States Steel Corp. has broken ground for a research center devoted to the development of new processes for making steel. . . . Battelle Memorial Institute has started construction of a new \$1.4-million research building.

College students taking scientific courses have had summer jobs with the government's Redstone Arsenal at Huntsville, Ala. The Arsenal, the Army's rocket and guided missile center, started the summer hiring program to steer scientific students toward government jobs after graduation.

Start With Any One of These

FOUR WAYS

To Cut
Your Handling Costs



1 WITH ROLLER OR BELT CONVEYORS

— Wherever packages, parts, or units have to be handled — do it faster, better, cheaper, with Standard roller or belt conveyors, power or gravity. Standard also builds slat, chain, wheel, or pushbar conveyors to fit your needs.



2 with a HANDIBELT

— a small, light, compact, easily portable and maneuverable conveyor unit that stacks, loads, unloads cases, cartons, packages up to 135 lbs. in weight. Can be used inclined, declined or horizontal. Electric motor operated.



3 with SPIRAL CHUTES

— effective time, work and money savers lowering pieces, parts, packages floor to floor. Scientifically designed and properly pitched—available in many types and sizes. Cost nothing to operate.

4 with PNEUMATIC TUBE SYSTEMS

— provide swift, sure, safe transportation of messages, documents, blueprints, samples, small parts, money; cylindrical or oval tubes 1½ inch upward with dispatching and receiving terminals for complete systems to meet your needs. Write for special bulletin SPT.



Write for Standard's general Catalog No. BW-83. Tell us what you want to handle or name equipment on which you want more information.

STANDARD CONVEYOR COMPANY
North St. Paul 9, Minn.
Sales and Service in Principal Cities

Standard
GRAVITY & POWER
CONVEYORS

High Taxes—a Cushion But

Have you been keeping away from the stock market lately because of worries over the possible trend of corporate earnings next year?

If you have, it might be smart to take some time out to reappraise the situation. The chances are you have either overlooked or accorded too little weight

to one mighty important bullish factor in the over-all picture: the death less than five months from now of the current costly excess profits tax. Don't

THE STING OF TAXES: A Recent Sampling

Fiscal Year	1951	1952	†1953	Fiscal Year	1951	1952	†1953
American Locomotive				International Bus. Mach.			
Pretax earnings	\$16.9	\$15.0	\$10.2	Pretax earnings	\$77.3	\$78.5	\$40.8
Net earnings	7.0	6.4	3.1	Net earnings	27.9	29.9	15.6
Net to pretax earnings	41.4%	42.9%	30.9%	Net to pretax earnings	36.1%	38.1%	38.2%
EPT to net income	29.2%	8.6%	E44.4%	EPT to net income	32.1%	23.1%	E25.8%
American Mach. & Metals				International Paper			
Pretax earnings	\$4.6	\$4.6	\$3.0	Pretax earnings	\$170.8	\$143.7	\$75.7
Net earnings	1.3	1.3	8.0	Net earnings	56.8	52.1	28.6
Net to pretax earnings	29.0%	28.1%	25.0%	Net to pretax earnings	33.3%	36.3%	37.5%
EPT to net income	57.9%	55.9%	E92.1%	EPT to net income	34.3%	22.2%	27.2%
Armco Steel				National Dairy			
Pretax earnings	\$104.1	\$77.6	\$44.9	Pretax earnings	\$66.4	\$71.1	\$41.9
Net earnings	35.0	31.3	16.1	Net earnings	26.5	27.8	15.3
Net to pretax earnings	33.6%	40.4%	35.9%	Net to pretax earnings	40.0%	39.1%	36.4%
EPT to net income	43.0%	25.5%	E33.9%	EPT to net income	18.7%	18.6%	E31.9%
Bendix Aviation				National Gypsum			
Pretax earnings	\$32.0	\$50.7	*\$29.5	Pretax earnings	\$19.8	\$19.6	\$11.0
Net earnings	11.8	15.3	*8.6	Net earnings	7.4	7.2	4.0
Net to pretax earnings	36.9%	30.2%	*29.1%	Net to pretax earnings	37.4%	37.0%	36.1%
EPT to net income	37.8%	57.6%	*64.9%	EPT to net income	31.0%	28.8%	32.8%
Borg-Warner				Packard Motor Car			
Pretax earnings	\$58.3	\$60.0	\$28.5	Pretax earnings	\$10.7	\$12.6	\$16.5
Net earnings	21.2	22.9	10.8	Net earnings	5.6	5.6	6.0
Net to pretax earnings	36.4%	38.2%	38.0%	Net to pretax earnings	52.2%	44.5%	36.6%
EPT to net income	26.9%	21.2%	E26.3%	EPT to net income	—	E8.0%	E31.2%
Chrysler Corp.				Philco Corp.			
Pretax earnings	\$151.0	\$247.7	\$160.9	Pretax earnings	\$22.0	\$25.6	\$30.0
Net earnings	72.0	78.7	44.1	Net earnings	12.2	11.5	12.2
Net to pretax earnings	47.7%	31.8%	27.4%	Net to pretax earnings	55.3%	44.9%	40.7%
EPT to net income	0.6%	39.4%	E75.0%	EPT to net income	—	E7.1%	E18.1%
Container Corp.				Stewart-Warner			
Pretax earnings	\$31.3	\$30.4	\$14.0	Pretax earnings	\$13.0	\$15.8	\$7.0
Net earnings	12.1	10.3	4.9	Net earnings	4.7	4.2	2.1
Net to pretax earnings	38.6%	33.8%	35.1%	Net to pretax earnings	31.7%	26.7%	30.8%
EPT to net income	51.6%	40.8%	E36.7%	EPT to net income	41.5%	62.1%	E55.8%
General Electric				U.S. Gypsum			
Pretax earnings	\$415.6	\$415.7	\$270.4	Pretax earnings	\$52.7	\$46.4	\$26.8
Net earnings	138.1	151.7	75.4	Net earnings	19.8	19.0	10.2
Net to pretax earnings	33.2%	36.5%	27.9%	Net to pretax earnings	37.6%	41.1%	38.1%
EPT to net income	47.5%	38.3%	E72.1%	EPT to net income	28.5%	16.4%	25.9%
General Motors				U.S. Rubber			
Pretax earnings	\$1,488.7	\$1,502.2	\$1,077.3	Pretax earnings	\$101.5	\$92.5	\$51.6
Net earnings	506.2	558.7	312.8	Net earnings	30.4	28.2	14.4
Net to pretax earnings	34.0%	37.2%	29.0%	Net to pretax earnings	29.9%	30.4%	28.0%
EPT to net income	34.9%	28.3%	65.3%	EPT to net income	E60.4%	E57.6%	E71.6%
B. F. Goodrich				Westinghouse Electric			
Pretax earnings	\$113.3	\$89.4	\$54.2	Pretax earnings	\$169.1	\$167.7	\$95.4
Net earnings	34.7	32.4	16.9	Net earnings	64.6	68.6	35.7
Net to pretax earnings	30.7%	36.2%	31.1%	Net to pretax earnings	38.2%	40.9%	37.4%
EPT to net income	E56.5%	E32.7%	E51.1%	EPT to net income	E25.7%	E17.4%	E28.4%

†—First half. *—Six month ending Mar. 31. E.—Estimated.

—All dollar figures are in millions.

How Soft?

let that push you too far the other way, though.

This levy is now slated to be laid in its grave Jan. 1 next. And its burial is guaranteed to cushion to a higher degree than many currently believe any drop in pretax earnings that's at all likely to be seen in 1954.

• **Firm Ground**—That's one of the many arguments Wall Streeters have been using lately to hypo this year's already flagging "summer rally" (page 106). And it's one they are quite entitled to use, too. In advancing it as a reason why stocks are a "buy" now, they stand on pretty firm ground technically.

You need only glance at the compilation on the preceding page. In 20 representative companies, you can see just how sharp has been the sting in recent years of federal income taxes generally and EPT in particular.

According to BUSINESS WEEK estimates, the least affected of the companies listed would have been able to report in the six months just ended net income one-quarter to one-third higher than was actually chalked up, if it had not been for the necessity of setting aside reserves to cover EPT liabilities. Others would have received substantially greater benefits from removal of EPT.

• **More Light**—Equally illuminating is a compilation made a few months back by Standard & Poor's Corp. According to the S&P findings, 65 widely diversified, prominent companies could have reported per-share earnings 25% to 81% higher last year if the EPT levy had not been operative.

Even more to the point, perhaps, is a study on the subject released last month by Moody's Investors Service. To calculate how much of a cushion the death of EPT could provide, it took the 125 stocks in its industrial stock index. Then it assumed that in the first half of 1954 (1) industrial activity would be down 10% generally, (2) commodity prices would be slightly lower than now prevailing, and (3) corporate pretax earnings would be off 20%.

On that basis Moody's came up with some interesting findings. With EPT out of the picture, average per-share earnings of the 125 stocks in question worked out for the half year at an annual rate of \$6.50, despite the assumed slowdown in business. That is nearly the same rate as was reported in the 1952 first quarter, and only about

~ ONE BILLION DOLLARS ~

Since January 1, 1953, Lehman Brothers managed, alone or jointly, or participated in the following

STATE, MUNICIPAL, REVENUE and AUTHORITY
bond issues aggregating over \$1,000,000,000.

*\$ 6,745,000 Akron City School District, Ohio 2 1/4% Bonds, Due 1954-74	*\$ 37,000,000 State of Oregon 2 1/4%, 2%, 1 1/4% & 1 1/4% Bonds, Due 1954-64
† 6,630,000 Bayonne, N.J., Sewage System 4% Bonds, Due 1959-73	† 33,350,000 Philadelphia, Pa. 4%, 3 1/4% & 2% Bonds, Due 1955-87
* 100,000,000 State of California Veterans' 2 1/4%, 2 1/4% & 2% Bonds, Due 1954-73	* 21,000,000 Puerto Rico Water Resources Auth. Elec. Rev. 4 1/4%, 4.60%, 4.30% & 3 1/4% Bonds, Due 1955-88
† 100,000,000 Delaware River Port Authority 4%, 3 1/4% & 3% Bonds, Due 1957-73 & 1983	* 10,000,000 San Diego Unified Sch. Dist., Calif. 5%, 3%, 2 1/4% & 2 1/4% Bonds, Due 1954-73
† 13,500,000 Detroit-Wayne Joint Bldg. Authority (Mich.) 3 1/4%, 3 1/4%, 3%, 2 1/4% & 2 1/4% Bonds, Due 1957-83	† 15,000,000 State of South Carolina 2.70% Bonds, Due 1954-60
* 12,300,000 East Baton Rouge Parish, La. Consolidated Sch. Dist. No. 1 3 1/4% & 3 1/4% Bonds, Due 1954-72	* 20,000,000 State of Washington School 4% & 2 1/4% Bonds, Due 1955-63
* 3,000,000 Flint, Michigan, Water Supply System Rev. 3 1/4% & 3% Bonds, Due 1954-83	† 3,000,000 Wichita, Kansas, School 4%, 2 1/4% & 2 1/4% Bonds, Due 1954-73
* 2,700,000 Galveston, Texas, Sewer System Revenue 3 1/4% & 3 1/4% Bonds, Due 1955-85	
* 63,300,000 State School Bldg. Authority of Georgia 4%, 3.70% & 3.60% Bonds, Due 1954-71	
† 3,000,000 City and County of Honolulu, Hawaii 5%, 3 1/4% & 3% Bonds, Due 1958-83	
† 122,315,000 New Housing Authority Bonds 3%, 2 1/4% & 2 1/4% Bonds, Due 1954-83	
† 16,200,000 New Housing Authority Bonds 2 1/4% & 2 1/4% Bonds, Due 1954-83	
† 10,400,000 New York City Housing Authority Various Rates Notes	
† 8,733,000 Houston, Texas, Water System Revenue 5%, 4%, 3.90%, 3.80%, 3% & 2.70% Bonds, Due 1954-84	
† 5,925,000 Houston, Texas 3%, 2 1/4% & 2 1/4% Bonds, Due 1954-78	
† 5,500,000 Kansas City, Kansas, Water & Elec. Lt. Plant Rev. 3%, 2 1/4%, 1 3/4% & 1 1/4% Bonds, Due 1954-63	
† 8,500,000 Kansas City, Missouri, Water Revenue 3 1/4%, 3%, 2 1/4% & 2 1/4% Bonds, Due 1963-78	
* 5,000,000 Knoxville, Tenn., Sewer Revenue 5%, 3.80% & 3 1/4% Bonds, Due 1957-88	
† 30,000,000 Los Angeles, Calif., Sch. Districts 3 1/4% Bonds, Due 1954-78	
† 12,000,000 Los Angeles, California 4 1/4%, 2 1/4% & 2 1/4% Bonds, Due 1954-73	
* 7,995,000 Memphis, Tenn. 2.90% & 2 1/4% Bonds, Due 1954-83	
* 27,100,000 Miami, Florida, Sewage Disposal & Sewer Rev. 5%, 4.30%, 4.25%, 4.20%, 4.10% & 4% Bonds, Due 1957-93	
† 6,600,000 Mobile, Alabama 3 1/4% Bonds, Due 1952-70	
† 3,700,000 Mobile, Alabama, Water Service Rev. 4 1/4% Bonds, Due 1957-80	
† 27,094,000 Nassau County, New York 3.10% Bonds, Due 1954-82	
† 150,000,000 New Jersey Highway Authority 3% & 2 1/4% Bonds, Due 1948-88	
† 125,000,000 New York State Thruway Authority 4%, 2 1/4%, 2.70%, 2.60%, 2 1/4% & 2 1/4% Bonds, Due 1958-84	

† Manager or Joint Manager

* Participant

6-Month Record. An excerpt from NEW YORK WORLD-TELEGRAM AND THE SUN, July 11, 1953:

...that mosquitoes, after having had lunch on some tasty person, would
Lehman Brothers led in the half year in management of syndicates for state, municipal and other tax-exempt bonds. With a total of \$508,584,000, Joint managers in this record are credited with the entire issue in each case. The positions of the leaders in the half year were:

Lehman Brothers	\$508,584,000
National City Bank	380,945,000
Smith, Barney & Co.	334,783,000
Harrison Ripley & Co.	321,316,000
Halsey, Stuart & Co.	317,227,000
First Boston Corp.	313,129,000
Bank of America N. Y. & S. A.	260,630,000
Bankers Trust Co.	260,200,000
Chase National Bank	209,002,000
Shields & Co.	184,105,000
Blyth & Co.	181,865,000
Phelps, Fenn & Co.	171,846,000
Goldman, Sachs & Co.	144,265,000
Chemical Bank & Trust Co.	143,760,000
R. W. Presprich & Co.	139,121,000
Drexel & Co.	135,825,000
First National Bank (Chicago)	96,270,000
Slifer, Krieger & Co.	75,000,000
Tripp & Co.	75,000,000
Northern Trust Co.	71,150,000
Harris Trust & Savings Bank	59,550,000
J. P. Morgan & Co., Inc.	49,686,000
Philadelphia National Bank	43,350,000
First National Bank (N. Y.)	42,704,000
Kiddier, Peabody & Co.	31,929,000
Ira Haupt & Co.	30,757,000
Glore, Fargan & Co.	27,950,000
B. J. Van Ingen & Co.	27,909,000
Equitable Securities Corp.	24,411,000
Guaranty Trust Co.	23,656,000
Allen & Co.	22,843,000
Marine Trust Co.	21,745,000
John Rogers & Co.	18,866,000
Robinson-Humphrey & Co.	18,800,000
Butcher & Sherrerd	18,242,000
First of Michigan Corp.	15,700,000
Kuhn, Loeb & Co.	15,082,000
Mercantile Trust Co. (St. Louis)	12,500,000
	12,097,000

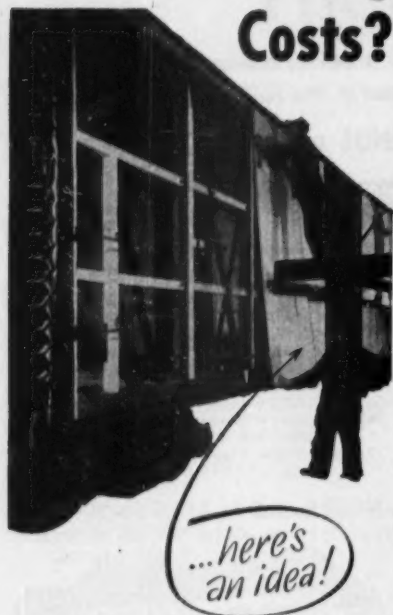
This is not an offering of any securities. A list of current offerings of tax exempt securities will be sent on request.

LEHMAN BROTHERS

One William Street, New York

August 12, 1953

Looking for Ways to Cut Car-Building Costs?



Siding and Lining of Rugged Exterior-type Fir Plywood Goes On Fast, Lasts for Years

MORE THAN 100,000 railroad cars have been built or re-built with Douglas fir plywood.

Strong, durable plywood serves as siding and lining on reefers, box cars, work cars, passenger coaches. Used for bulkheads, flooring, baggage racks, cabinets, trim.

Cuts costs because big panels cover quickly, go on fast, require no special tools. Plywood cars are tighter, lighter, economical to maintain. Rugged plywood protects loadings. It's proved in use—a superior material for car building and modernizing jobs.

Write for "Plywood Gets the High-ball." Douglas Fir Plywood Association, Tacoma 2, Washington.

Fir Plywood

Industry trademarks are your guide, guard and assurance of DFPA quality-tested plywood

Fir plywood is made in two types. 1. Interior-type for indoor or structural uses; 2. Exterior-type for uses exposed to water or weather; EXT-DFPA on panel edge means 100% waterproof glue. Grades within each type meet exact use needs.

PlyShield is the "good one side" grade for siding, lining and other jobs where only one side of the panel will be in view in the finished job.

EXT-DFPA



SPECIFY DFPA-INSPECTED PLYWOOD

"...elimination of EPT will be important for many com- panies..."

CUSHION starts on p. 72

11.6% less than the annual earnings rate chalked up by the same group of shares in January-March, 1953.

• **A Difference**—In one respect, however, you will find a considerable difference in the way the subject is treated by Moody's and S&P from the way you hear it in a lot of the talk in Wall Street.

The trouble is this: Unlike those two old-line statistical organizations, too many Streeters are now talking as though you are bound to see earnings remain at high levels next year no matter what, thanks to the scheduled death of EPT. Actually there are many "ands, ifs, and buts".

• **Selective**—Elimination of EPT—a stiff levy, all agree—will be important for many companies. But according to estimates, it will actually be of benefit to only about 17% of all the nation's corporations. Most helped will be companies in the paper, rail equipment, metal fabricating, automotive, electrical equipment, industrial, chemical, and industrial machinery trades. Left untouched will be many companies in such already tax-sheltered groups as the railroads, airlines, utilities, and extractive industries.

And it will be of no moment whatever to some other companies—including many in textiles, retailing, movies. They've already experienced a sharp recession in earnings from their 1946-49 base, and this has long since made EPT of only academic interest to them.

Not all those subject to EPT, moreover, have been equal sufferers from the impost. So you can see that any buying of shares as a speculation based on possible tax savings of their issuer next year would have to be on a very selective basis.

• **Caution**—It wouldn't be smart, either, to take all the "EPT-cushion" estimates now flooding in on you at their face value. For one thing, as any conservative will tell you, such projections are strictly mathematical. They furnish only a rough guide.

Indeed, you'll find a great many are based on mere estimates of what a company's EPT liability was in a certain period. Not too many corporations make public the exact size of such payments.

• **More or Less?**—Even some conservatives believe that in a number of cases you'll find profit benefits accruing from EPT's coming demise to be greater than now indicated. They reason that corporations will have a great induce-

ment to increase operating efficiency and cut down on extravagant spending the excess profits tax has encouraged—or at least not discouraged.

But it seems generally agreed that "EPT savings" in most cases will prove to be less than now indicated. For one thing, many companies subject to the levy are now filling large defense orders. So if the tax is dropped, they may face next year a general tightening up on government price redetermination and renegotiation.

And that's not all. Labor can be expected to fight for a good share of any tax savings accruing to a company. A great deal may also have to be passed on to consumers in the form of lower prices—particularly if business fades next year.

• **Key**—It's this factor—next year's business levels—that holds the answer to the size of "EPT savings" in actuality. All available estimates of such savings are based to a considerable extent on beliefs (or hopes) that today's business conditions will hold.

The question is: Will business hold up? And until that's answered, those now buying stocks in the hope that next year's "EPT savings" will hold earnings of a company somewhere around current high levels are in a sense buying a pig in a poke.

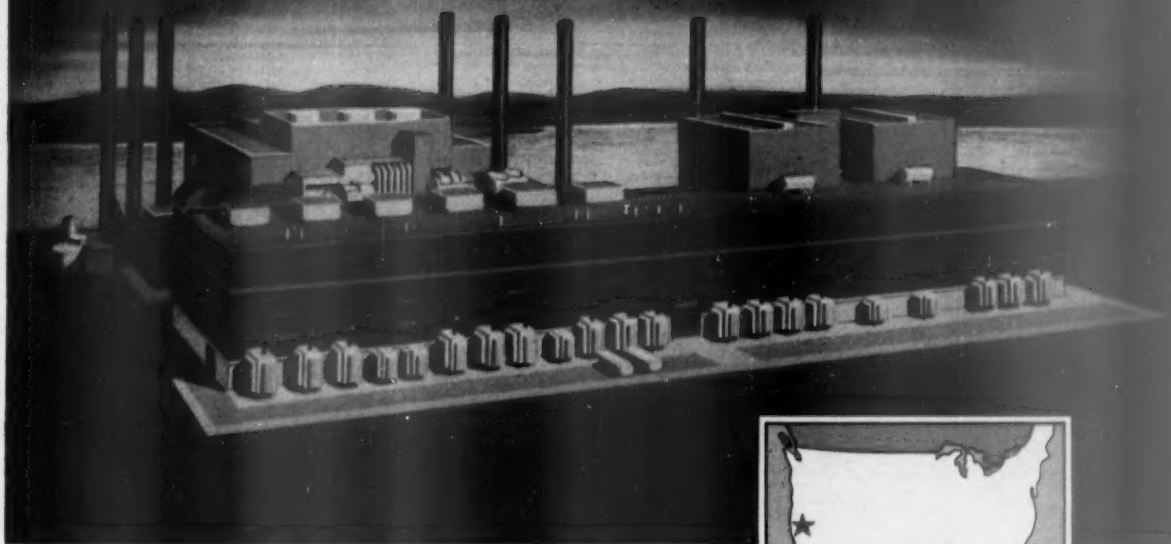
Take the capital goods companies. On the whole they have not yet been affected, as have so many others, by a return to buyers' markets. But many crystal ball readers already see in these fields a turn away from their sellers' markets of the last eight years. If that happens, there'd be trouble maintaining profit margins. And it wouldn't take much dwindling of profits to wipe out a good deal of the hoped-for tax savings.

• **Pro and Con**—Formerly many corporate analysts had the idea that today's high tax rates would tend to keep net profits from falling too abruptly if business fell off. Many a report last year, however, proved that the tax factor in a time of stress didn't always work that way (BW—Feb.14'53,p110). More than a few later earnings reports (BW—Aug.8'53,p60) have confirmed this.

Wall Streeters call such talk crazy. Didn't last year's steel strike, they ask, show there is a big cushion in high tax rates? They point out that, though the strike brought 1952 pretax earnings of 27 leading steel companies \$928-million below 1951 level, net earnings of the group, because of a drop of \$786-million in federal tax payments, fell off only \$142-million.

They're quite right, too, only they fail to add this: Per-share earnings on common stocks of many leading steel companies last year showed drops ranging from 20% to around 45%.

Complete Responsibility— Anywhere★



Contra Costa Steam Plant, one of the west's largest, went into operation in 1951, is now being expanded.



In California at locations only seven miles apart two steam electric plants are under construction for Pacific Gas and Electric Company. One is rated at 500,000 kilowatts, the other at 600,000. The design and construction of both plants is by Bechtel.

The resources of experience, organization and physical equipment serving these and other power projects are readily available to utility companies contemplating expansion programs . . . of any size, anywhere.


BUILDERS FOR INDUSTRY



BECHTEL CORPORATION

Los Angeles • SAN FRANCISCO • New York





Wanna' Take the Mystery Out of Automatic Elevators?

No fast pitch here.

These are straight forward answers to actual questions most frequently asked about Westinghouse Selectomatic Elevators with Automatic Traffic Pattern Control.

Q. What is Selectomatic?

A. Selectomatic is the Westinghouse supervisory elevator control that enables cars (with or without operators) to work as a team in meeting the varying demands of heavy traffic buildings, such as office buildings with their morning rush . . . coffee hour . . . lunch . . . the 5 o'clock scramble . . . and after-hours.

Q. Then what is Automatic Traffic Pattern Control?

A. Automatic Traffic Pattern Control is a new Westinghouse development that thinks for itself, adjusts and readjusts to the correct operating pattern . . . switches *with* the traffic flow automatically . . . operates 24 hours a day, with or without car attendants.

Q. How does Automatic Traffic Pattern Control work?

A. Everything is Automatic! With Automatic Traffic Pattern Control, guesswork, time-clock or starter dial settings are eliminated—it completely outdates all previous control systems.

Q. What advantages does Automatic Traffic Pattern Control offer?

A. Westinghouse Selectomatic with Automatic Traffic Pattern Control (without operators) turns starters into good-will ambassadors . . . assures elevator service of uncanny efficiency—swift, comfortable, utterly dependable . . . cuts operating costs up to \$7,000 per car a year.

For more details on this amazing new development, send for Booklet B-5269. Westinghouse Electric Corporation, Elevator Division, Department 2, 9 Rockefeller Plaza, New York City.

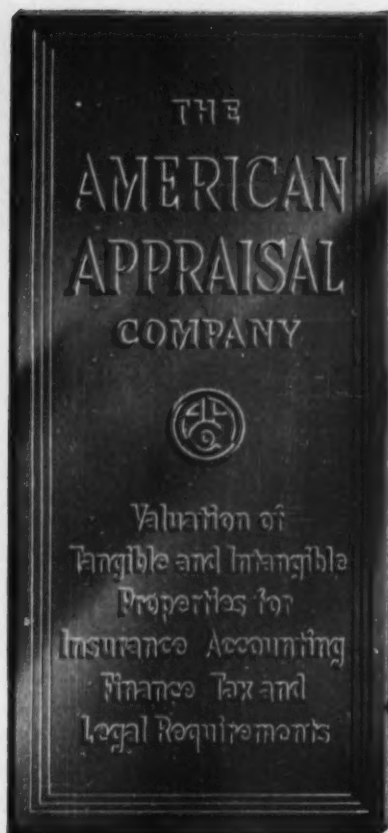
Westinghouse Elevators

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS

PROTECTIVE MAINTENANCE AND SERVICE

YOU CAN BE SURE...IF IT'S Westinghouse

J-96684



Your Janitor...his time is money, his troubles are your troubles!

This janitor is putting 500 MOSINEE Towels into a SENTINEL cabinet. This saves him time and trouble . . . because the Sentinel's 500-towel capacity, plus the fact that 25% to 50% fewer towels will be used (due to the Sentinel's "control" on towel consumption and reduction of waste), mean fewer janitor service-trips. Less work . . . better service to users . . . lower cost.

Write for free samples and name of nearest distributor.



"Fringe" Aid for Small Firms

Mutual Life comes up with new type of employee benefit plan designed to help smaller companies provide insurance and pension plans for workers.

This is a pension-minded age, and employers bidding in the labor market may find that it's not only a question of wages and salaries: Their insurance and pension plans may also be a factor in attracting and holding workers.

In this respect, says Louis W. Dawson, president of Mutual Life Insurance Co. of New York, small employers frequently find themselves at a disadvantage. And that's why the "think men" at Mutual have come up with a new type of employee benefit plan, designed particularly to help small and medium-sized companies provide insurance protection and retirement income for their workers.

• **Modules**—It's called the "module multiprotection" plan, and it aims to permit a little company to tailor insurance-pension features to its own particular needs, rather than have to buy group insurance that may not necessarily fit all its requirements.

The name "module" was taken over from the field of design, because under it insurance and pension features—like pieces of module furniture—can be put together in various combinations to meet the desires of the buyer.

In architecture, modular design means repetition of one or more modules, or units having a common dimensional factor (BW—Aug. 8 '53, p70).

In Mutual's employee benefit plan, the modules that can be combined under a single contract include straight life insurance, pensions, disability benefits, accident, hospital and surgical benefits, and liberal benefits for employees leaving the company before retirement age.

• **Costs**—Modular design in building makes for lower costs. And, says president Dawson, the module plan of Mutual permits combination of basic elements in such a manner as to avoid overlapping coverage and thus provide a "package" at substantially less cost.

For example, under group insurance there might be two media of coverage—group life insurance and group annuities—with separate premiums. But the same individual would not receive both the full insurance benefit and the full annuity. The Mutual plan aims to eliminate this overlapping in the coverage.

From the viewpoint of the insurance field, the combination of elements brings a unique feature to the Mutual plan. In the case of group insurance, the insurance, annuity, and accident

and health policy has to stand on its own feet, and must be priced to stand on its own feet.

In the case of Mutual's new benefit plan, however, insurance and pension costs offset each other to a degree. If the mortality rate is high, there is a resulting lower pension cost, and vice versa. There is no double contingency reserve. The result is a lower premium cost for the user of the plan.

Premiums for the Mutual plan, of course, still take quite a slice out of company funds, if the employer pays the full cost. And the very small employer would still have to pay proportionately more than the medium-sized employer, because premium rates become lower as the amount of coverage and number of persons covered increase. But Mutual says the cost for him is still comparable to that of group insurance, and the plan meets the needs of the smaller companies more closely than group insurance does. Mutual itself does not write group insurance.

• **Advantages**—"Group insurance techniques are used primarily by the larger employer," says Dawson. "Many small firms have found that pension plans designed for individual purchase are not suited to their needs or financial condition. Small firms, therefore, have had to rely on piecemeal protection for their employees, or have left the job up to the federal social security program."

And that, he adds, is why small employers have found that they are at a disadvantage in the labor market.

• **Catching On**—Mutual's plan was introduced this summer. And already, tailored module benefit programs have been put in operation by such diverse small companies as an automobile sales agency in Louisiana, a southern agricultural cooperative, an upstate New York printing company, an Illinois real estate firm, small banks in Pennsylvania and Arizona, and a furniture factory in Virginia.

And a vast market for the module type of plan is seen. In the United States, Dawson reminds, there are 1,200,000 business concerns with fewer than 20 employees each. In the manufacturing field alone, there are over 157,000 firms that employ less than 20 people. Another 58,000 employ 20 to 100 people.

Any company with 10 or more employees can get a module plan.

• **How It Works**—The plan as set up by one company with 25 full-time

salaried employees, for instance, provides:

(1) Lifetime retirement incomes for workers when they reach the age of 65. These are geared to provide, together with social security, 50% of the annual salary at retirement. Exclusive of social security, they range from \$35 to \$260 a month, according to size of salary.

(2) One-sum death benefits ranging from \$1,680 to \$8,000.

(3) Weekly benefits of \$18 to \$75 a week for 26 weeks to employees in the event of total disability.

(4) Benefits in the event of termination of employment. While under the setup this company pays the entire cost of the plan, the employee acquires an equity in the plan after he has been with the company 10 years. This accrues at the rate of 20% a year in the succeeding five years, so that at the end of the fifteenth year, he would be entitled to take his full accrued equity in the plan with him, if he left the company.

The payroll of this company is \$108,000 annually, and the payroll of covered employees, \$77,000.

Cost of the plan: \$9,720 a year, or less than 10% of annual payroll.

• **Creator**—Mathematical-minded E. H. Wells, Mutual Life vice-president and actuary, who was born of American parents 52 years ago in Chefoo, China, is the "father" of the module plan. It was "in the works" 10 years.

Among the special features he worked out for the plan are these:

- Employees can enter the plan up to the age of 70.

- Family benefits are available to married men, including accident, hospital and surgical benefits.

- Pensions are available for widows of employees dying before retirement.

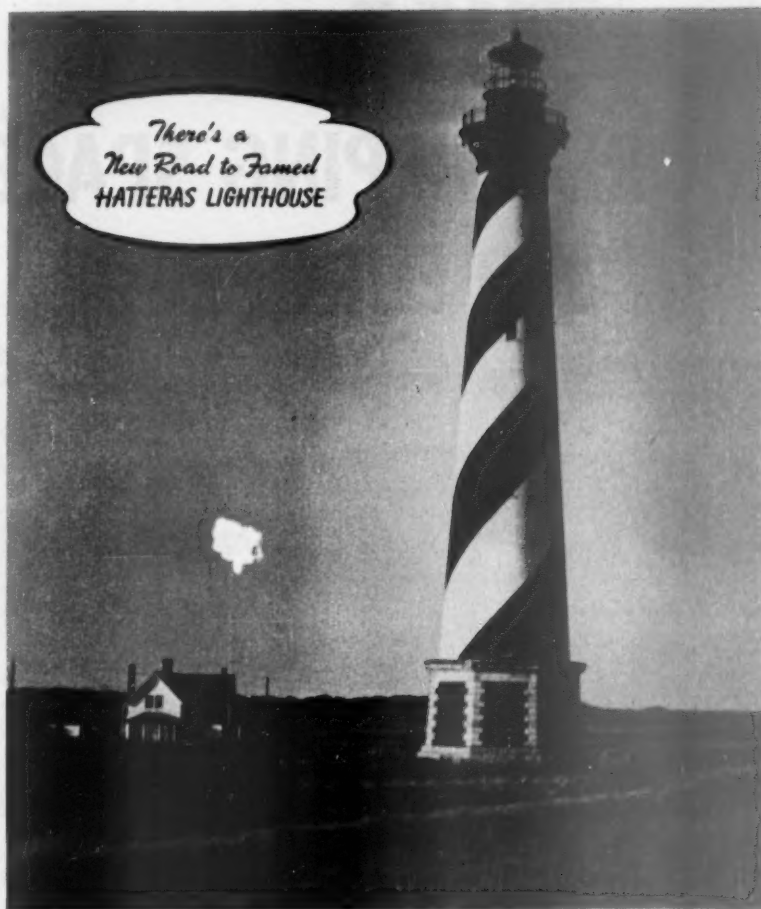
The widows' pension is one feature of which Wells is especially proud.

As every proprietor of a business knows, if a worker dies, leaving a widow and no children under 18 years of age, the widow collects no social security monthly benefit payments until she is 65.

Under a module plan, however, it is possible to set up a pension for the widow to start the moment her husband-worker dies, and to continue as long as she lives.

Particularly in small towns, where the local folk often look to the proprietor of a small business as under moral obligation to provide financial assistance for the widow of an employee, this module plan provision is currently arousing considerable interest.

Almost as much interest, in fact, as the growing realization that small companies, to compete with large corporations for labor, must provide benefits to supplement and expand the pension payments supplied by social security.

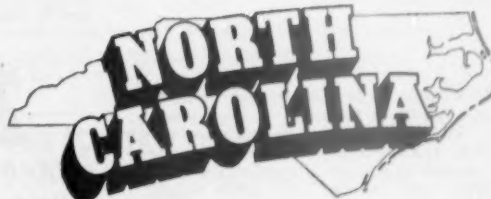


IT LEADS TO ISOLATION

... and yet it is part of a 70,000 mile road system that makes markets, labor and materials readily accessible.

North Carolina not only offers industry ACCESSIBLE ISOLATION, but its working people enjoy a VARIETY VACATIONLAND the year around. This means happy, contented workers — a vital factor in industrial prosperity.

For a list of available sites
and industrial buildings
and other information,
communicate with



DEPARTMENT OF CONSERVATION AND DEVELOPMENT, RALEIGH, N. C.

TWA offers **MORE SHIPPING SPACE TO EUROPE**



Two ALL-CARGO round-trip transatlantic flights weekly

TWA (Trans World Airlines) offers two transatlantic round-trip, all-cargo flights direct to Shannon and Paris... with regular "Speed-pak" service to England, Germany, Switzerland, Italy, Greece, Egypt, Israel, Saudi Arabia, Iran, Iraq, India and now Ceylon.

Pioneer in scheduled transatlantic all-cargo service, TWA provides the only scheduled, one-airline cargo service across the U. S. direct to principal capitals in Europe and the Middle East. In addition... TWA overseas all-cargo service offers:

- 1. Booking service** for shipments of 100 pounds or more... assuring on-time deliveries.
- 2. Confirmation of delivery** available a few days after arrival of shipment at destination.
- 3. One-airline service** between 60 cities throughout the U. S. and 21 world centers abroad with a single air waybill expedites international shipments and simplifies handling.
- 4. Fast, frequent transatlantic service.** All daily TWA flights carry air cargo, and there are 74 crossings, east and west, every week.

TWA-trained personnel are ready to serve you at all times. Be smart... save money... insist on routing your shipments via TWA. It's the modern way to get goods to market in a hurry... and at low cost. Phone your nearest TWA office today.

TWA
TRANS WORLD AIRLINES
U.S.A. • EUROPE • AFRICA • ASIA

ALL TWA FLIGHTS CARRY AIR MAIL AND AIR CARGO

FINANCE BRIEFS

A test of demand for tax-exempt bonds is expected this week when 13 new issues aggregating \$78-million hit the market. Since the July rally, many municipalities have been stepping up plans for marketing securities (BW—Aug. 8 '53, p. 128). As a result, municipal bond prices held almost steady last week—for the first time since June—instead of moving up. The reception given this week's offerings may determine whether more cities will give the go-ahead signal to financing plans.

Union Pacific Railroad this week became the first rail carrier to institute a family fare-reduction plan on its first-class tickets. Beginning Sept. 1, the head of a family will pay full one-way fare in each direction for first-class travel on a round trip. The other parent, and all children from 12 to 22 years old, will pay only half of one-way fare in each direction; those 5 to 12, less than half. Children under 5 years of age, as usual, will ride free.

Trustees in Ohio are to have greater leeway in investing funds in their care, despite Gov. Frank J. Lausche's objection. The legislature has overridden the governor's veto of a bill to let fiduciaries invest up to 35% of trust funds controlled by them in common stocks.

Cash dividends paid by corporations in July—\$576-million—were 5½% above the figure for July last year, says the Dept. of Commerce.

Dental financing: The Fifth District Dental Society and the First American National Bank in Nashville, Tenn., have worked out a plan whereby a patient can get dental services on the installment plan, making payment over six or 12 months or longer, instead of the 90 days' credit previously extended. The dentist discounts the patient's note at the First American, and the patient makes the monthly payments there.

The Treasury shelled out only \$97-million to pay off its \$2.8-billion issue of 2% one-year certificates that matured Aug. 15. Holders of the balance of the maturing issue accepted new 2½% one-year certificates in exchange.

The 114-year-old Pequot Mills of Naumkeag Steam Cotton Co. at Salem, Mass., may have to close because of unprofitable operations when the present supply of cotton is used up, says the company's president, Rudolph C. Dick—unless the company gets some new business.

for **High Strength** and
Longer Life in
Farm Implements

Specify



N-A-X HIGH-TENSILE, having 50% greater strength than mild carbon steel, permits the use of thinner sections—resulting in lighter weight of products. It is a low-alloy steel—possessing much greater resistance to corrosion than mild carbon steel, with either painted or unpainted surfaces. Combined with this characteristic, it has high fatigue and toughness values at normal and sub-zero temperatures and the abrasion resistance of a medium high carbon steel—resulting in longer life of products.

N-A-X HIGH-TENSILE, with its higher physical properties, can be readily formed into the most difficult stamped shapes, and its response to welding, by any method, is excellent. Due to its inherently fine grain and higher hardness, it can be ground and polished to a high degree of lustre at lower cost than can mild carbon steel.

Your product can be made stronger . . . to last longer . . . and in some cases be manufactured more economically, when made of N-A-X HIGH-TENSILE steel.



KEEP YOUR SCRAP MOVING TO YOUR DEALER

GREAT LAKES STEEL CORPORATION

N-A-X Alloy Division

Ecorse, Detroit 29, Michigan

NATIONAL STEEL CORPORATION

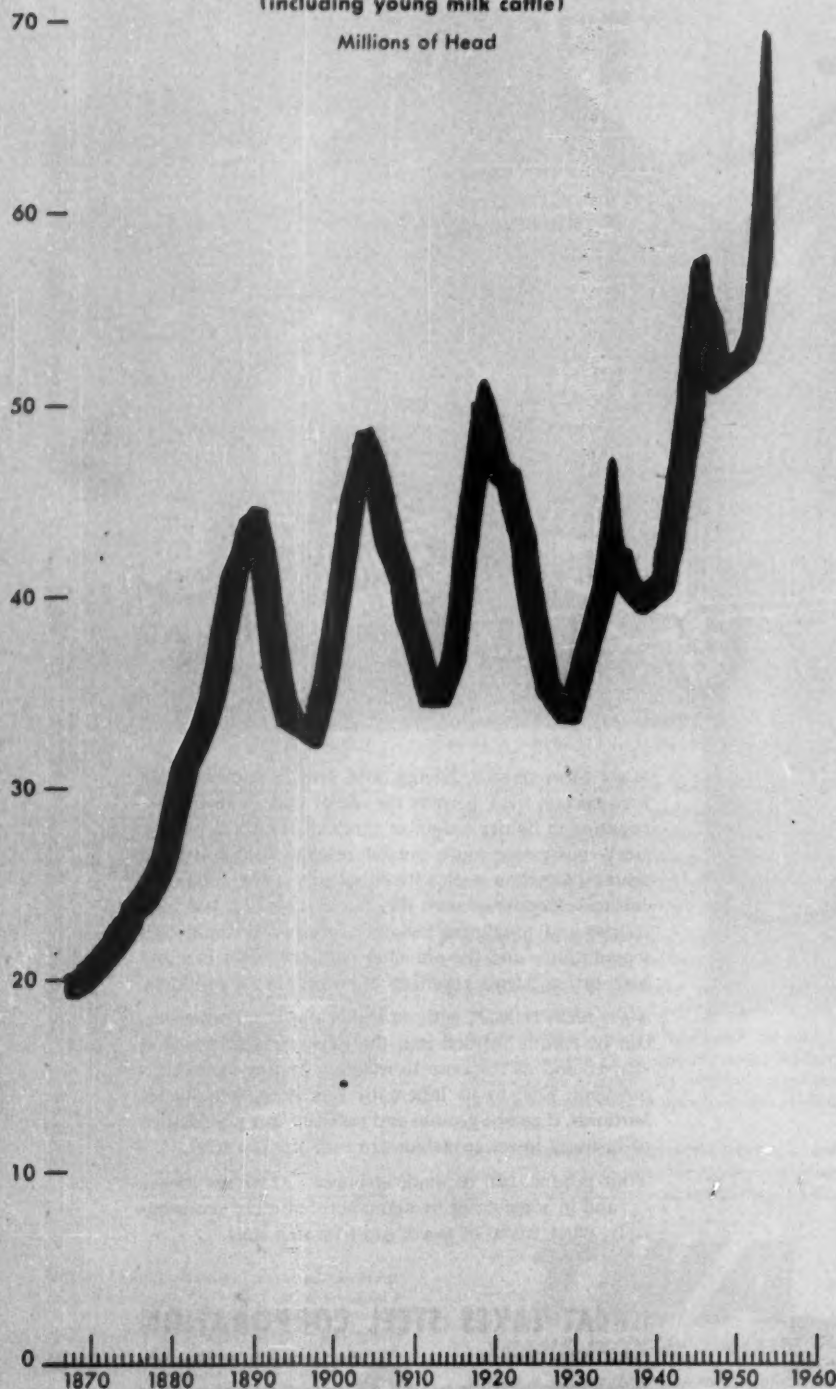


COMMODITIES

Beef Cattle on Farms

(including young milk cattle)

Millions of Head



Data: Dept. of Agriculture.

BUSINESS WEEK



Cycles:

It has been many a long year since beef eaters have had it so good. They're getting more beef now than ever before—and getting it at prices that have fallen some 20% since the beginning of the year. Whether they know it or not, they're riding on the crest of the latest cattle cycle.

Take a look at the chart on this page. Since 1867, busy men with notebooks have been collecting figures on the cattle population as of Jan. 1 each year. The results make it look as though there hasn't been a peaceful moment in the cattle industry since 1890; the cattle industry has been going either straight up or straight down all the way.

These cycles are more than a gleam in a statistician's eye. They're the basic facts that decide how much beef you eat and what you pay for it. They also give a roller-coaster air to the industry all the way from rancher to feeder, from packer to retailer. They decide who gets the Cadillacs and who gets squeezed.

• **The Factors**—Why does beef act that way? What makes a cattle cycle? Where are we in the current cycle—and where do we go from here? Here



Cattle Are on the Crest

are the basic factors behind the answers:

- Like any other businessman, the cattle grower is there to make a profit. If prices are good—and look as if they're going to stay good—and if his costs are relatively low, he'll expand production. But, unlike most businessmen, he has to base his decision not so much on what conditions are now (although the mood of confidence generated by good times is an important part of any cycle) as on what he thinks they will be some three years from now. It takes that long, on the average, between his decision to build up his herd and the time when the results come on the market as beef. Thus, much of his planning is based on guesswork.

- Prices are hard enough to predict. But they aren't the cattlemen's only worry. The most important element in his costs—weather—is completely unpredictable. Building up herds is a long and expensive proposition, so he's not likely to change direction in any one year of good or bad weather. But a long spell of either will make him change.

- While he's making his decision,

there are roughly 1-million other cattlemen also looking at the same factors that affect the industry and also trying to decide whether to expand production, contract, or stand still. And in this business, decisions tend to reinforce themselves. The only way to build up herds is to hold cattle back from slaughter and breed them instead. This reduces supply; that raises price; and that, in turn, convinces more cattlemen to join the parade. The same thing happens on the way down; as herds are liquidated, price goes down—so more herds are liquidated.

- **Grower and Feeder**—There are two kinds of cattlemen, and two basic operations involved in producing the beef you eat. First there's the cattle grower, the original supplier. He decides how much you get. Then there's the feeder. He decides how good it's going to be.

Cattle can go just so far on grass. To get them to the right weight (from the animals' point of view, this means overweight), and to get them tender and tasty, you have to "finish" them on corn or some other high-protein feed.

Actually, cattle are grown and finished in all parts of the country. Some

**STEP UP PRODUCTION OF
SMALL MACHINERY, TOO!**
...with this All-Electric
Adjustable-Speed Drive



**Eliminate mechanical
gear boxes, clutches and
variable-pitch cone pulleys..**

SAVE MONEY 10 WAYS!

- Boosts output
- Cuts down rejects
- Reduces "down time"
- Cuts changeover time
- Handles more jobs
- Saves Space
- Simplifies machine design
- Reduces operator fatigue
- Increases safety
- Operates from a-c.

Already the Reliance V*S Jr. has brought the benefits of smooth, powerful starting . . . wide speed ranges . . . smooth, fast reversing . . . quick, smooth stopping . . . to users in many industries. Find out today what the V*S Jr. can do for you! D-119

GET THESE FACTS!

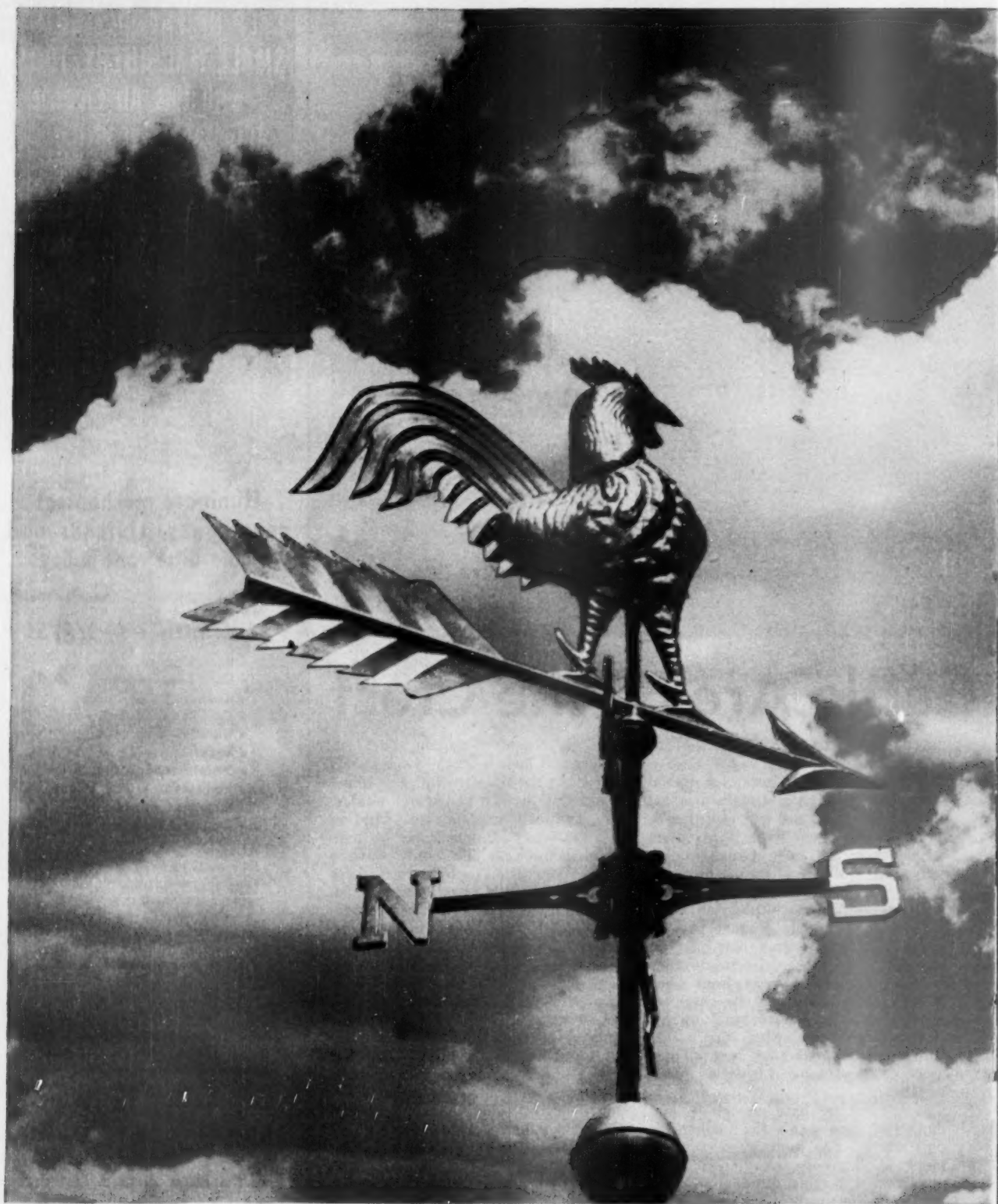
New 12-page bulletin contains dimension data, drive characteristics, operating features, applications, components, operating principles. Ask for Bulletin D-2102.

Sales Representatives in Principal Cities

**RELIANCE
ELECTRIC AND
ENGINEERING CO.**

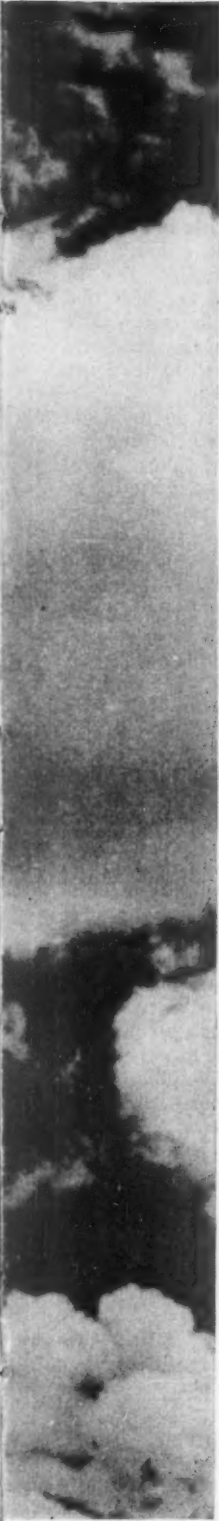
1069 Ivanhoe Road • Cleveland 10, Ohio

"Motor-Drive is More Than Power"



We sponsor this series of advertisements about the Traffic Manager and his job because we believe the Traffic Man is management's answer to better and more economical movement of material.

—Chesapeake and Ohio Railway, Terminal Tower, Cleveland 1, Ohio



"Can the Traffic Department Deliver Rain?"

One of this company's manufacturing
plants was about to shut down
because its reservoir was dry.

It isn't the kind of thing you would ordinarily refer to Traffic,
but the V. P. in charge of the manufacturing division had
seen how his company's traffic people could rise to an emergency.

Within a few hours the Traffic Department had the latest technical
data on rain making. It had located a source of supply for dry ice
pellets, and a charter plane operator who would undertake the job.

It also came up with an alternate plan: Instead of seeding
the clouds, how about hauling in water by tank cars as long as
the emergency lasts? All things considered, this seemed
the more practical solution and the plant kept running on
rail-delivered "rainfall."

Again a resourceful Traffic Department had found a simple way
out of a serious difficulty. But the Traffic Department can
solve such problems only if it knows about them. And it is sure to
know about them only if its head sits in on management-level
discussions. In all too many organizations the Traffic Manager
is still restricted in his usefulness by an old-fashioned
conception of his job.

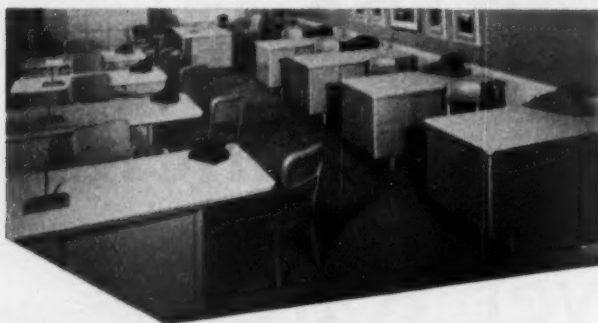
*As one of the great carriers of
merchandise freight in the country, the*

Chesapeake and Ohio Railway

is vitally interested in any plan

that will move more goods, more efficiently

Tool your office for efficiency



STEELCASE

saves space, increases work output!

You can *know in advance* how much you will get in more efficient use of space and increased work output when you install Steelcase equipment in your office. A given area will seat 25% more employees; users report work output increases as much as 35%. And Steelcase styling, color and beauty have an instant favorable effect on customers and employees alike. Ask your local Steelcase dealer for names of leading national organizations standardizing on Steelcase.

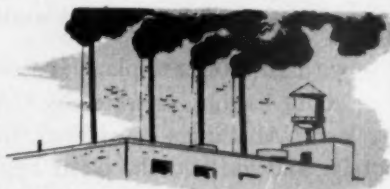
For new ideas in office planning, write for "Tooling Up Your Office"

METAL OFFICE FURNITURE CO., Grand Rapids, Michigan

Look for your Steelcase dealer in the "Office Equipment" classification of your phone directory.

STEELCASE
Business Equipment

Does your plant
have a smoke or
fume problem?



... THEN YOU NEED A

BENDIX-FRIEZ AEROVANE*



One of many Bendix-Friez precision instruments that are solving many important problems for industry.

This finely-precisioned instrument provides a continuous, accurate, *electrically-written* record of wind direction and velocity. It offers you the *scientific* way to get data that's indispensable for working out smoke and fume control most effectively. Every day Bendix-Friez weather instruments . . . the accepted standard of comparison . . . are proving that they can perform more and more valuable services for industry. Let us demonstrate how we can help you.

*REG. U.S. PAT. OFF.

FRIEZ INSTRUMENT DIVISION of

1416 Taylor Avenue • Baltimore 4, Maryland

Export Sales:

Bendix International Division, 205 East 42nd St., New York 17, N. Y.

Bendix
AVIATION CORPORATION

"... when prices are moving up, the feeder can't help but make money . . ."

CATTLE CYCLES starts on p. 82

times the same man does both in an integrated operation. Generally speaking, he has more flexibility in adjusting to the market than do either a specialized grower or a feeder. But by far the greatest part of the beef that ends up on your table recognizable as beef has started on the grasslands of the West and traveled to the Corn Belt feedlots for finishing.

• **Feeding**—The stopover in the Corn Belt states can take anywhere from two to 18 months. From the culinary point of view, the longer the better: The best kind of beef you can get is from an animal that reaches the feedlot before he's one year old and leaves it before he's three. But the culinary point of view doesn't prevail unless you're willing to pay for it.

Feeding is a carefully calculated operation—based almost entirely on a guess. The feeder tries to guess what he'll get from the packer for the finished steer by the time he's ready to sell it. His profit, roughly, is the margin between that and what he paid the grower for the animal—less the cost of the feed.

When cattle prices are moving up, the feeder can't help but make money—often lots of it. But in an erratic or declining market—with more or less of a price floor under corn and none under cattle—this gets to be a risky business. By and large, the feeder has to sell his stock soon after it's ready for market—no matter what price he expects to get. Normally, there is an optimum point for fattening cattle—a point where adding weight costs more than the returns from that weight. Unless the feeder expects a really sharp price jump in the near future (as he did in 1946, just before the end of price controls) he loses money by holding on to the animal beyond that point.

• **Last Stop**—The packer buys both higher grades of finished meat from the feeder and lower-grade grass cattle from the rancher. The prices he pays, in competition with other packers, reflect what he thinks he can get for the dressed meat, plus byproducts. His turnover is high; but his profit margins, on the whole, are very low. He makes much more from sales of byproducts—chiefly hides and tallow—than from the meat. Some of the biggest packers haven't paid a dividend in years.

The individual packer can, of course, control his supply. But he wants to buy all the animals he can get, both to keep costs down by working at capacity,

and because turnover counts heavily in his business. The industry as a whole buys and processes all the meat that's offered to it at any time. From there on the objective is to get the beef into consumption as fast as possible. Storage space is strictly limited, and "sell it or smell it" is a byword of the industry. Price to the retailer, and from him to the consumer, settles at the highest point that will get all the beef eaten.

• **Cycle**—This tangle of factors eventually resolves itself into a cattle cycle. To see how, consider the history of the current cycle—starting at the high point of the previous one.

The end of World War II found cattlemen long on beef and short on confidence. Cattle numbers were at a then record high. But demand for beef moves directly with consumer income—and all around them cattlemen heard talk of a recession "just around the corner." When the end of price control brought prices they'd never seen before, they decided this was it. They sold out not only their large inventories, but a good part of their breeding herd as well. They were sure this was too good to last.

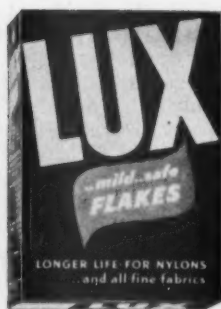
By some time in 1948 they realized they were wrong. The recession hadn't materialized. And even with the high rates of slaughter prices held up. High demand seemed here to stay.

So they started to rebuild herds. They added 600,000 head of beef cattle in 1948, 1-million in 1949, 4-million in 1950, 6-million in 1951, and another 5-million in 1952.

The first hint of trouble came in 1952. Corn Belt farmers had had a soft corn crop the year before; it couldn't be stored, and the only way to use it was to feed it to cattle right away. They clamored for feeder cattle from growers. At the same time, weather had been ideal for the western ranges, and pastures were in excellent condition. Corn Belt farmers were competing not only with the rich grass, but with packers who were buying the better-than-usual grass cattle for immediate slaughter. Prices for feeder cattle climbed sky-high; the Cadillacs went west that year.

• **Price Break**—Then, in 1952, when Corn Belt farmers came to sell the stock they'd bought in 1951, they found that prices were down—not by much, but by enough so that some of them got little more for the higher-grade fed cattle than they'd paid for feeders. Cost of the corn they had fed the cattle came close to a total loss. So they were a good deal more cautious when it came to restocking their feedlots in the summer and fall of 1952.

By this time, supplies of the feeders, from the buildup that had started in 1948, were very high. And the weather shoe was on the other foot. While



Lever Brothers

cuts

glue costs

25%



simply adds water to **AQUA-FLAKES**

Case and carton sealing glue costs have been reduced at a number of Lever Brothers plants. As much as 25%. With AQUA-FLAKES . . . National's dry dextrin adhesive.

AQUA-FLAKES are first made as a complete liquid adhesive. Then the water is removed. You simply replace it. And the dry flakes make a quality liquid adhesive.

AQUA-FLAKES give you uniform filming properties, clean machineability, lightning tack and excellent mileage.

Test AQUA-FLAKES® yourself. We'll be glad to send a trial shipment at a special quantity price.

STARCHES



ADHESIVES

RESYNS®

NATIONAL STARCH PRODUCTS INC., 270 Madison Avenue, New York 16, N. Y.

**improve on
hand bending**

WITH LOW FIRST COST —

COMPACT FLEXIBILITY

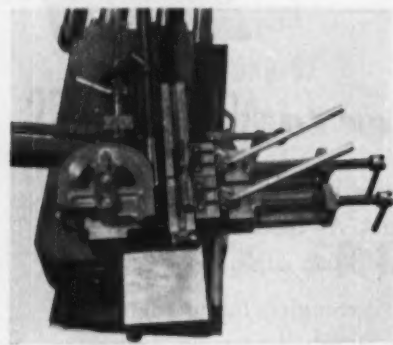
SIMPLIFIED OPERATION

WALLACE BENDING MACHINE

It's plain, sensible good business to investigate the advantages of using a No. 800 1½" Wallace semi-automatic, hydraulic rotary bender in your shop.



For 190° rotation in either direction—for accurate, uniform cold bending at moderate production rates—short or long runs. Simple inexpensive tooling. Easily changed for right or left hand operation. Single valve for 190°. Compact—only 21" x 54" x 34" high. Only 900 lbs. Available with or without mandrel unit.



The top view of the Wallace No. 800 shows optional toggle clamps for rapid positioning of tubing; plane gage to index previous bends; interchangeable bending dies; and special stop gage on the mandrel rod for sequence bending.

WRITE FOR BULLETIN 35 — SECTION L
THE WALLACE SUPPLIES MFG. CO.
Dept. BW 1312 DIVERSEY PKWY.
Chicago 14, Ill.



drought hit the Southwest in 1952, the corn crop in the Midwest was excellent; farmers could either feed corn or store it at a guaranteed price.

Result: The first real cattle price break was in lower-grade (grass) cattle in the summer and fall of 1952.

By the end of the year prices of these grades had fallen almost a third. This made 1952's price average look sick compared to that of 1951—the peak year (cover, chart).

Most feeders decided they were safe enough, and feedlots were filled fuller than ever before.

• **All the Way**—Then, starting with January of this year, the top grades broke—and broke fast. Prices for all grades now are some 30% to 40% under a year ago.

For the first six months of this year, slaughter was up 34% from last year—and last year's slaughter was already high. Every month since February has set a new record high for the month.

Prices at retail, which had been sliding off slowly through all of 1952, really started to come down around the beginning of this year. Often in the past, this much of an increase in slaughter would have meant a bigger

drop in prices, both of the live animals and at retail. But the big supply now comes—luckily—at a time of record consumer income and very strong demand for beef. And the competition has been kind to beef producers this time: Hog producers are at the opposite end of a cycle of their own; supplies of pork are low and prices are high.

• **Prospects**—Where do we go from here? Lots of people wish they knew.

Whatever happens, you'll be eating plenty of beef for a few years to come. Breeding herds are now so large that even if slaughter keeps up at the current rate, this year's crop of calves will keep the number of live cattle even. An increase in the proportion of cows sent to slaughter would signal a downturn; this has not yet happened. All this means that supplies, not counting seasonal ups and downs, will stay at this level at least.

But if the drought lasts much longer or spreads, or if prices fall much further, cattlemen may well decide to get out from under. If that happens, supplies, for a time, will go still higher—and prices will come down much more. But then you'd better eat hearty. It'll be a long time before you'll have it so good again.

Alcoa-Alcan Tie in Court

Justice Dept. moves to cancel Alcoa's contract to purchase primary aluminum from Canadian company—pointing up its stress on clearing way for new producers.

Aluminum Co. of America is in the courts again. As the latest step in a long string of litigations that started in 1937, the Dept. of Justice has asked the courts to cancel Alcoa's recent contract to purchase 600,000 tons of primary aluminum over the next six years from Aluminum Co. of Canada, Ltd. (BW—Jun.13'53,p128). A separate deal with Kaiser Aluminum and Chemical Corp., made at the same time, which covers 186,000 tons, is not affected.

• **Past Ruling**—The last time Alcoa was in the courts was in 1950. The judgment that time was that Alcoa and the individual defendants who owned stock in both Alcoa and Aluminium, Ltd., Alcan's parent company, should dispose of their stock in the Canadian company; that a trusteeship should get the voting rights of the stock involved; and that the case should stay open for five years, during which the government could ask for further action. It's under the last provision that Justice Dept. is bringing the current action.

• **Government Views**—The suit puts the spotlight on two conflicting angles of the government's aluminum expansion program.

One is that the domestic industry should be broadened with new primary producers. The other angle is that the mobilization expansion goal should be met at the lowest possible cost to the government—with new producers if possible, but if not, with low-cost aluminum from Canada.

Justice Dept.'s suit last month was a triumph for the former point of view. Said Attorney General Herbert Brownell's petition in firm language:

• The 1950 decision was made on the supposition that separation of the two companies would free Aluminium, Ltd., to become, in essence, a fourth major producer competing in the U.S. market. The new Alcan-Alcoa long-term contract limits the complete separation and makes Alcoa the Canadian metal's principal channel to the U.S. market.

• The contract will restrict competition in the domestic market because, to the extent that Alcan's production goes to Alcoa, it will deprive nonintegrated fabricators of a possible source of primary aluminum.

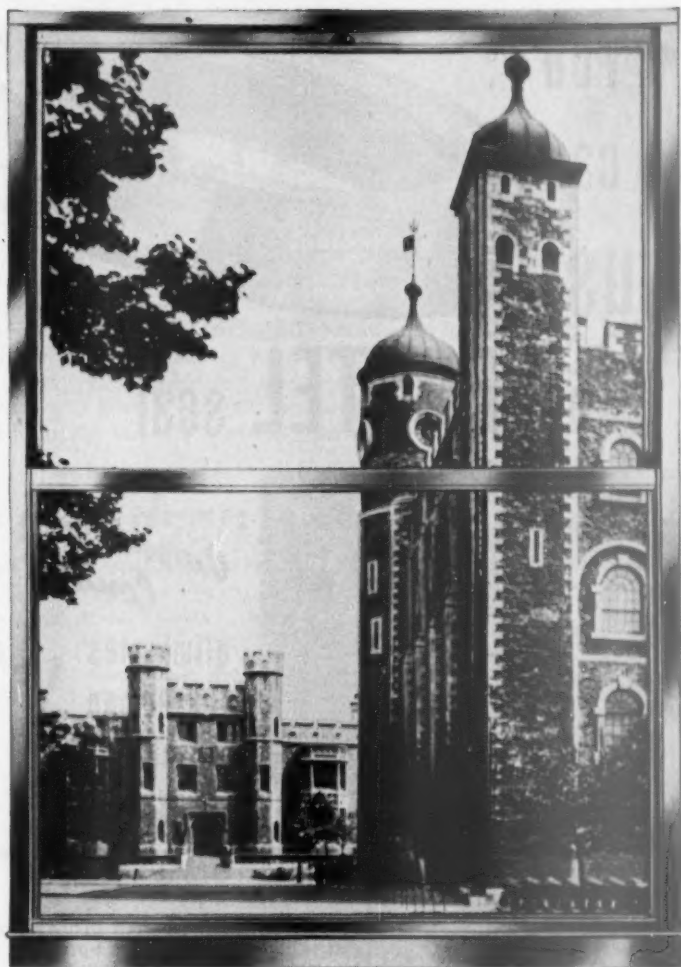
• The Alcan-Alcoa agreement threatens to defeat the government's

What?

Adlake

windows in the Tower of London?

It's too bad that William the Conqueror's master builders didn't have access to ADLAKE Windows when they began the Tower in 1078...for we believe that, had ADLAKE Windows been installed then, they would still be in perfect operating condition today!



...for Adlake Aluminum Windows
will last longer than the building itself, with no maintenance!

Literally, ADLAKE Windows pay for themselves by eliminating all maintenance costs except routine washing. Once installed, they'll keep their clean-cut good looks and easy operation for the life of the building, with no painting, scraping or other maintenance whatever! What's more, their woven-pile weather stripping and patented serrated guides give an ever lasting weather seal!

ADLAKE Aluminum Windows assure lifetime value, beauty and efficiency. Write for full details—you'll find ADLAKE representatives in most major cities.



IN ALL AMERICAN RAILROADS . . .
ADLAKE Double-Glazed "Breather" Windows assure passengers an unclouded view of the scenery. No dehydrants to change, no maintenance other than routine washing...and visibility is unaffected by temperature and humidity!



IN STREET CARS, BUSES, TROLLEY COACHES... ADLAKE Aluminum Sash gives maintenance-free operation beyond the life of the vehicle. Deep-pile weather stripping and exclusive serrated guides form a perfect weather seal, and they never stick or rattle.



THE Adams & Westlake COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago
Also Manufacturers of ADLAKE Mercury Relays and ADLAKE Equipment for the Transportation Industry

You
can
trust



Leather Oil Seals

a TROSTEL seal



*Automatic
Control*

eliminates
the human
variable



Leather Packings



Synthetic
Rubber Packings



Synthetic
Rubber Oil Seals

It's human nature to have occasional "off days" ... as your own quality control engineers will testify.

Here, at Trostel, we keep quality from getting a personal bias ... by using specially developed *automatic* production machinery like the Trostel-designed multiple-die hot molding "consoles" pictured above.

These machines eliminate the possibility of human error in calculating and measuring critical time-pressure-temperature cycles. They do a precision job ... automatically, unfailingly.

Our employees find this arrangement makes their work easier. Our customers know it results in packings and oil seals of *consistent quality* regardless of the day of the week or the time of day they are made.

It's another good reason why:
"You can trust a Trostel seal."

Illustrated Bulletin On Request

ALBERT TROSTEL PACKINGS, LTD., Lake Geneva, Wis.

Formerly Division of Albert Trostel & Sons Co., Milwaukee, Wis.

BRANCH OFFICES

NEW YORK
LOS ANGELES
SAN FRANCISCO
SEATTLE • HOUSTON
WORCESTER, MASS.

TROSTEL

packings

**TROSTEL
QUALITY**

efforts to bring new U.S. firms into primary aluminum production. The contract will enable Alcan to proceed with its huge new expansion program at Kitimat, British Columbia. Alcan's additional low-cost productive capacity will dim the prospects of new domestic producers.

• **Alcoa's Case**—Alcoa's reply, in equally firm language, held that there are not more than a few hundred fabricators in this country who can use aluminum in its primary (pig or ingot) form. Almost all of the 14,000 fabricators start their operations with the aluminum in some semifabricated or fabricated form. They'll be able to get more of this because of Alcoa's contract with Alcan.

Alcoa went on to say that for those who can use primary aluminum, Alcan has committed itself to supply 110,000 tons a year. Moreover, contracts the "Big Three" producers (Alcoa, Kaiser, and Reynolds Metals Co.) signed with the government for second-round expansion require them to supply two-thirds of the new capacity for the first five years, and 25% for the next 15 years, to nonintegrated users.

Alcoa also made some other points:

• On the basis of its own expansion plans, and even with the Canadian metal it will get under the contract, Alcoa will be supplying a smaller share of the U.S. market in 1953-1958 than it did in 1952.

• As to the contract hindering domestic primary aluminum expansion, Kitimat is there whether the deal goes through or not.

• **Olin and Wheland**—Even before the Alcoa-Alcan deal, the government wasn't having too much luck in its attempts to get new, nonintegrated, aluminum smelters into the domestic picture. Anaconda is building a new plant, to be sure, but is expected to use the aluminum in its own wire and cable business. And two other would-be producers, Olin Industries, Inc., and Wheland Co., were having trouble financing their plans in the tight money market without government loan guarantees.

The Office of Defense Mobilization was unwilling to guarantee the loans. The economy angle was uppermost, and its ground rules for the current round of aluminum expansion—fast tax write-off (on 85% of the investment), a five-year market guarantee on the future output, and nothing else—stayed put. Once the Alcoa-Alcan deal was signed, there was even less argument in favor of loan guarantees, and the Olin-Wheland hopes seemed dead.

Now the Justice Dept. suit changes things around again—and brings up some new talk about help for Olin and Wheland. The big question bothering ODM is this: Is the government justified in guaranteeing a loan in excess of \$50-million to Wheland, a company

whose net worth is in the neighborhood of only \$3-million? Gordon P. Street, president of Wheland, says he is now "more optimistic."

ODM's situation is simpler with Olin, a much bigger outfit. It plans to put some of its own money into the proposed project, and is reported even to have scaled down the request for a loan guarantee on the rest of the required financing. At the end of last week, John Olin, president of the company, announced that plans for financing entrance into the aluminum industry were almost completed, and that the company was now waiting to negotiate with the government so that contracts could be signed and construction started. At midweek, Olin's proposal was put up to the Defense Mobilization Board for a top-level decision.

In the meantime, Harvey Machine Co., Inc., one of the two new companies actually lured into the primary aluminum business since Korea, has encountered a new snag. Last month, Congress killed funds for a \$1-million transmission line that the Bonneville Power Administration was to construct for Harvey. (Bonneville traditionally builds the transmission line to its industrial and utility customers.)

However, Rep. Ben Jensen, chairman of the House Appropriations Subcommittee that kyoed the Bonneville money, hints that the appropriation may be made later for the transmission line. Harvey won't be ready to operate its proposed aluminum plant for at least another two years.

COMMODITIES BRIEFS

The Agriculture Dept. reports a corn crop of 3.3-billion bushels in prospect for this year. Secretary Benson said this did not change the outlook that crop restrictions would be needed next year, but he found some disagreement in his department. Some Agriculture experts said the crop would have to come to 3.4-billion bushels before restrictions would be invoked.

Users of acrylonitrile, important raw material for synthetic fibers, grease resistant rubbers, and coating for paper and fabrics, have gotten a price break. American Cyanamid Co. and Monsanto Chemical Co. lowered the price from 43¢ to 36¢, in tank car lots.

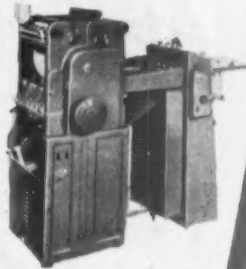
Wheat farmers, by an overwhelming vote, accepted strict federal controls on their 1954 crop in return for high price supports. This casts a long shadow on the Administration's goal of a freer farm economy.

Good Printing

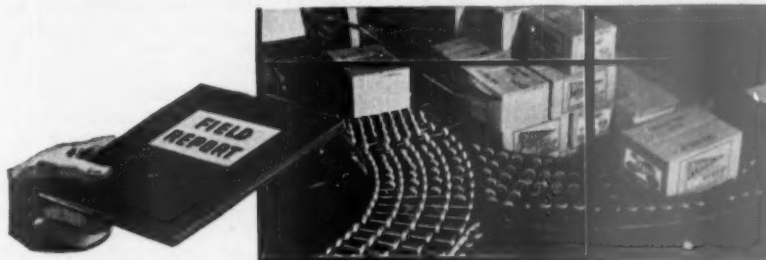
costs no more . . . and often less . . . than mediocre printing . . . when you own a Davidson Dual. That's because the Davidson is engineered for accuracy . . . designed for quality . . . precision-built for close register, easy pressure regulation, full ink coverage. It's easy to operate . . . quick to get rolling . . . and most economical. And it's ruggedly constructed for many years of dependable, trouble-free service. You'll like the fine work it does . . . clean, crisp line work . . . excellent halftone and multi-color printing. And it's the only press that will do offset printing, dry lithography and all types of letterpress printing.

THE **Davidson Dual**
THE WORLD'S MOST VERSATILE PRESS

If you do printing . . . take a tip from hundreds of Davidson users . . . get the facts about the Davidson Dual. Write us today. There's no obligation.



DAVIDSON CORPORATION
A subsidiary of Mergenthaler Linotype Company
Dept. 16, 29 Ryerson St., Brooklyn 5, N. Y.



YOU'LL PROFIT FROM THE BEST of this cost-cutting experience

Experience i a Great Teacher

That's why Rapistan now releases a library of fast-reading data on how firms in nearly every business have turned materials handling problems into profits. In Field Report form, these case histories include photos and details of each problem and its solution.

Write today for the Field Reports you want. They're full of ideas, including ways to use your present equipment more profitably.

No charge, no obligation. Check coupon and mail.

Rapistan®
BETTER CONVEYING EQUIPMENT

The RAPIDS-STANDARD CO., Inc.
18 Rapistan Bldg., Grand Rapids 2, Mich.

Please check your business classification:

<input type="checkbox"/> Manufacturing	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Wholesale	<input type="checkbox"/> Retail
--	---------------------------------------	------------------------------------	---------------------------------

Check reports below which will be of greatest benefit to you:

<input type="checkbox"/> Aircraft Parts	<input type="checkbox"/> Heating Equipment
<input type="checkbox"/> Auto Supplies	<input type="checkbox"/> Household Appliances
<input type="checkbox"/> Beverages	<input type="checkbox"/> Laundry Services
<input type="checkbox"/> Building Supplies	<input type="checkbox"/> Leather Products
<input type="checkbox"/> Canneries	<input type="checkbox"/> Machine Parts
<input type="checkbox"/> Chemicals	<input type="checkbox"/> Magazines, Newspapers
<input type="checkbox"/> Cosmetics	<input type="checkbox"/> Meat Packing
<input type="checkbox"/> Dairy Products	<input type="checkbox"/> Metal Stamping
<input type="checkbox"/> Fabricated Metals	<input type="checkbox"/> Paint Products
<input type="checkbox"/> Floor Coverings	<input type="checkbox"/> Paper and Publishing
<input type="checkbox"/> Food Products	<input type="checkbox"/> Pharmaceuticals
<input type="checkbox"/> Freight Terminals	<input type="checkbox"/> Power Tools
<input type="checkbox"/> Fruits, Vegetables	<input type="checkbox"/> Sugar Refining
<input type="checkbox"/> Furniture	<input type="checkbox"/> Tobacco Products
<input type="checkbox"/> Grain and Feeds	<input type="checkbox"/> Warehousing
<input type="checkbox"/> Grain Milling	<input type="checkbox"/> Waste Materials
<input type="checkbox"/> Grocery Store	<input type="checkbox"/> Wood Products

There are many other Rapistan Field Reports. If your business is not listed, please tell us about it.



TABLE MAGIC



with the help of Glassine and Greaseproof Paper

It's just short of magic the way a meal can now be prepared in minutes—with the modern magician's wand of Flexible Protective Packaging.

Flexible Packaging brings to the kitchen many difficult-to-package foods... fresh, flavorful, economical.

If you process or package foods learn how Rhinelander's protective packaging papers, Glassine and Greaseproof, can help you solve the problems of freshness and flavor. Rhinelander papers are available in dozens of basic grades, or they can be tailor-made to your requirements.

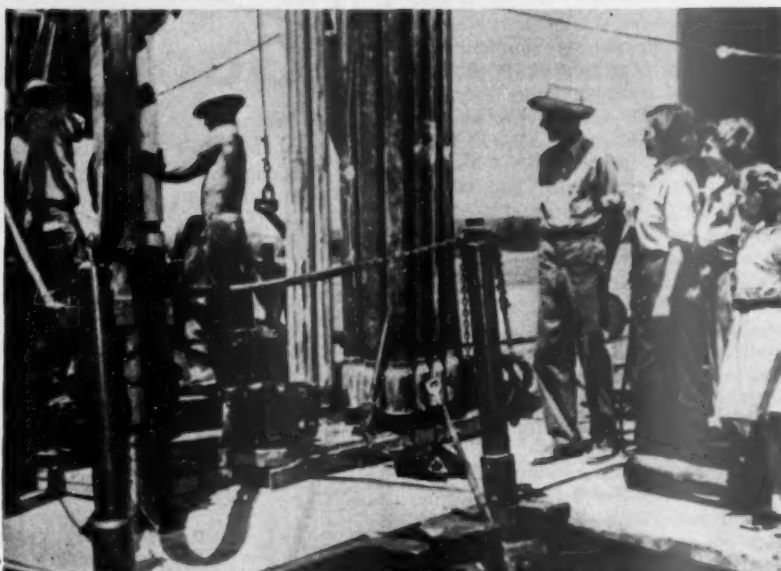
Write for samples
stating your application



Rhinelander
PAPER COMPANY

RHINELANDER, WISCONSIN

LOCAL BUSINESS



Oil—and Headaches

ST. LOUIS—When a company strikes oil, its usual reaction is one of jubilation. Not so Laclede Gas Co., which found oil by accident in July, and last week announced—in a relieved tone of voice—that the discovery would not interfere with its plans.

Laclede, which serves this area with natural gas, has been having a tough storage problem. Early this year it got the Missouri legislature to pass a law under which Laclede could obtain subsurface strata of porous rock for underground storage of reserve gas supplies, by condemnation if necessary. So it started making test drillings near St. Louis.

Early last month, one of the drilling crews struck oil on a farm in northern St. Louis County (picture). In a state that produces very little crude oil, and in an area that produces none, the discovery set off a fever of excitement.

But to Laclede, the oil was relatively unimportant; it still had the gas to store. And its big problem was whether oil wells and an underground gas storage facility could be operated simultaneously at the same place. Last week it came up with the answer: Yes. The two oil strikes were at depths of 1,029 ft. and 1,200 ft. Laclede plans to store its gas at least 1,500 ft. down, in a different stratum. There's no oil down there, and the two strata are separated by a thick, gasproof layer of hard rock.

No More Highways?

LITTLE ROCK—Virtually all road-building work in Arkansas is at a stand-

still today, while the state and the counties fight over who's going to pay for rights of way for state and federal-aid highways.

For years, the state has paid for the rights of way—and has paid high. Farm land that normally sold for \$20 to \$50 per acre was valued by its owners at up to \$1,000 an acre when they found it was wanted for highway purposes. And even when the state refused to pay the exorbitant demands and went to court with condemnation proceedings, local juries almost always rendered verdicts "friendly" to their neighbors.

So the State Highway Commission has just adopted a new policy: It will build no more highways, anywhere in the state, unless the counties or local governments furnish the rights of way. The idea is that residents may be less inclined to "stick" their own local governments and that local courts may be less "friendly" if they know their own county or city will have to pay.

So far only a handful of Arkansas' 75 counties have agreed to bear right-of-way costs; the rest are holding out. And there's no sign of any break in the stalemate.

River Fight Ends

TOLEDO—For more than four years, landowners whose spacious estates line the Maumee River have been trying to oust commercial sand dredgers from the section of the river adjacent to their properties. It's been an uphill struggle, but it seems they've won their fight.

The City Council, the Port Commission, and the Toledo Plan Com-

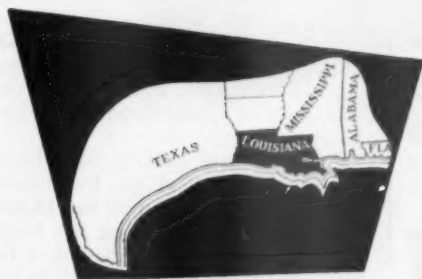


SOUTH LOUISIANA, G. S.*

...INDUSTRY'S NEW SOUTHERN FRONTIER

Every section of the country has its advantages for industry . . . but no other has all the advantages of the Gulf South*, the area served by United Gas. Consider the merits of South Louisiana, for example, with its deep-water ports and hundreds of miles of navigable inland waterways; its tremendous supplies of industrial water; its great stores of salt, limestone, sulphur, oil and natural gas; its skilled, cooperative workers; its moderate, year-round working climate; its adequate supply of electric power.

All these factors in profitable industrial operations can be yours in South Louisiana. For information about fuel supplies in the cities and towns served by United Gas in this area, write our Industrial Development Division, P. O. Box 1407, Shreveport, Louisiana.



One of a series of ads, now in its 15th consecutive year, describing the industrial advantages of the Gulf South.

South Louisiana Communities Supplied with Natural Gas from the Pipe Lines of United Gas

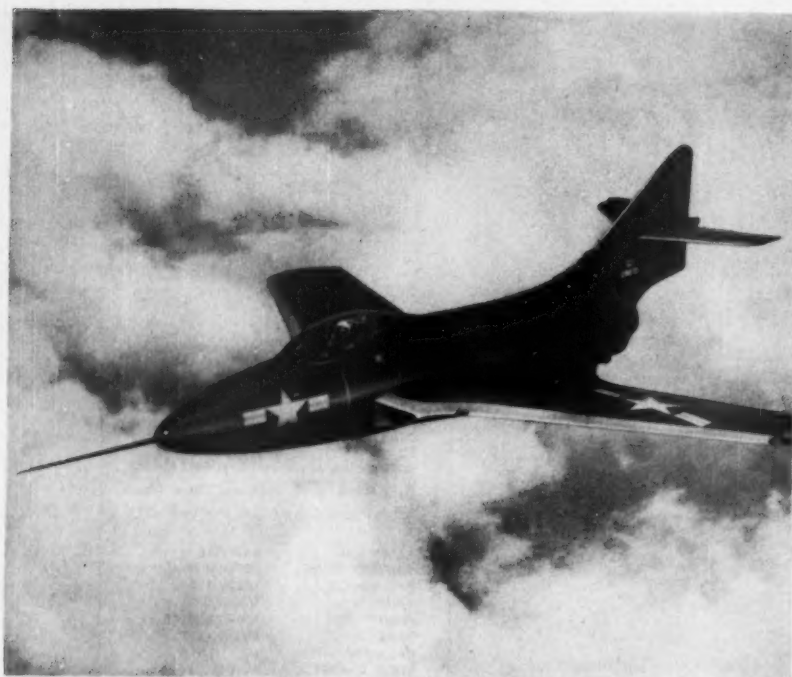
ABBEVILLE	LAWTELL
ABITA SPRINGS	LECOMPTÉ
ALLEMANDS	LEESVILLE
AMITE	LOCKPORT
ANGIE	LOREAUVILLE
ARABI	LULING
BALDWIN	LUTCHER
BELLE CHASSE	MADISONVILLE
BOGALUSA	MANDEVILLE
BREAUX BRIDGE	MANSURA
BROUSSARD	MAPLEWOOD
BUNKIE	MARSHVILLE
CAMERON	MARRERO
CARENCRO	MAURICE
CENTERVILLE	MERTMENTAU
CHALMETTE	MERRYVILLE
CHENEYVILLE	MIDLAND
CHURCH POINT	MILTON
COTTONPORT	MONTEGUT
COVINGTON	MOREAUVILLE
CROWLEY	MORSE
DELCAMBRE	NATLABAY
DENHAM SPRINGS	NEW IBERIA
DE QUINCY	NEW LLANO
DE RIDDER	NEW ORLEANS
DESTREHAN	NEW SARPY
DUSON	NORCO
EGAN	OAKDALE
ELTON	OBERLIN
ERATH	OPELOUSAS
ESTHERWOOD	PARADIS
EVERGREEN	PARKS
FENTON	PEARL RIVER
FRANKLIN	PLAUCHEVILLE
FRANKLINTON	PONCHATOULA
GLENMORA	RACELAND
GOLDEN MEADOW	RAYNE
GONZALES	RESERVE
GRAMERCY	ROANOKE
GRENA	ROSELAND
HAMMOND	ROSEPHINE
HANSON CITY	ST. MARTINVILLE
HABAHAN	ST. ROSE
HARVEY	SCOTT
INDEPENDENCE	SIMMESPORT
IOTA	SLIDELL
IOWA	SOBRENTO
JEANERETTE	SULPHUR
JENNINGS	SUNSET
KAPLAN	TICKFAW
KENNER	VARNADO
KENTWOOD	VINTON
KINDER	WASHINGTON
LAFAYETTE	WELSH
LAKE ARTHUR	WESTLAKE
LAKE CHARLES	WESTWEGO
LAPLACE	YOUNGSVILLE

UNITED GAS

SERVING THE

Gulf South

UNITED GAS CORPORATION • UNITED GAS PIPE LINE COMPANY • UNION PRODUCING COMPANY



Navy's new answer to the MIG

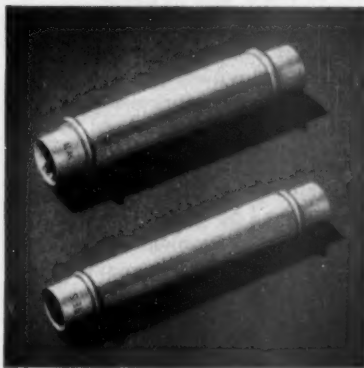
By the time you see this magazine, many of the new swept-wing Grumman Cougar Jets will be in operation.

According to the Navy, the performance of these carrier-based high-speed jets is fully equal to that of the Russian-made MIG 15. They will replace the Navy-piloted Grumman Panthers which played such an impressive role in the Korean war.

By this time, the radically new Cougar has succeeded the Panthers on Grumman production lines. The manufacturer continues to use Ward Leonard resistors (at right) in the plane's electrical systems.

Dependable electrical controls may be as important to your products as they are to these modern jet fighters. Whatever your needs, Ward

Leonard engineers will be glad to assist you in the right selection. Write Ward Leonard Electric Co., 68 South Street, Mount Vernon, N.Y.



VITROHM WIRE-WOUND POWER RESISTORS perform perfectly under shock, vibration, wide temperature ranges, varying atmospheres and other adverse conditions found in aircraft controls.

3 • 13

WARD LEONARD

ELECTRIC COMPANY

MOUNT VERNON, NEW YORK

Result-Engineered Controls Since 1892



Ward Leonard
Electric Company
Mount Vernon, New York

mission all refused to act on their pleas that the dredges were unsightly, noisy, and smoky, and that constant dredging might eventually weaken the river's banks. Finally, this spring, the property owners turned to the U. S. Army Corps of Engineers.

Anybody who wants to dredge in a navigable river in the United States has to get a permit from the Army Engineers, who have general authority over all of the country's navigable inland waterways. The three dredging companies operating in the Maumee applied for—and got—permits in the past, because, as far as the Engineers knew, no one objected.

But this spring, the riverbank residents finally filed a written protest with the Engineers. So when one of the dredgers applied for a renewal, he was turned down.

Before the Engineers can issue a permit, they must be satisfied that the applicant has legal right to do what he wants. Under Ohio Law, landowners along a river have title up to the middle of the river. An applicant has no right to dredge without the owner's permission. And that's not easy to get along the Maumee.

Meanwhile, the dredgers continue to dredge—but only until the present permits expire. Two of them run out next year; the third is valid until Dec. 31, 1956.

Disappearing Lemons

LEMON GROVE, CALIF.—A few weeks ago the chamber of commerce of this San Diego suburb had an idea: Why not give Saturday shoppers a pleasant reminder of where they were? So it decided to set up a stand at the town's main intersection and give free lemonade to all comers.

Then the blow fell: The committee couldn't find any lemons growing in Lemon Grove. And after checking the price of lemons grown elsewhere in southern California and "finding they were as expensive here as in Cleveland or New York," the committee decided not to use fresh lemons at all.

So when the booth opened last Saturday, Lemon Grove shoppers drank artificial lemonade, made with a concentrate that's manufactured in New Jersey.

Lemon Grove used to have lemon groves—6,000 acres of 'em. But it's only 10 mi. from the center of San Diego—right next to the expanding city limits. Early in the century it had only a few hundred inhabitants. By 1938 it had grown to 4,000 persons, by 1949 to 8,000. Today the population is estimated at 17,500.

The lemon groves have all been pulled down to make way for new housing.

Satisfaction rests on the carton



Dealer good-will is vital in the highly competitive beer industry. Pabst Brewing Co. brewer of one of America's great beers, does an outstanding merchandising job with retailers, also makes sure that Pabst "Blue Ribbon" reaches the sales floor looking as good as it tastes. Pabst, like many other famous brand names, is protected in shipment by UNION Corrugated Containers.



UNION BAG & PAPER CORPORATION

CORRUGATED CONTAINER DIVISION • Box Plants: Savannah, Ga., Trenton, N. J., Chicago, Ill.

Eastern Division Sales Offices: 1400 E. State St., Trenton 9, N. J. • Southern Division Sales Offices: P.O. Box 570, Savannah, Ga.

Western Division Sales Offices: 4545 West Palmer, Chicago 39, Ill. • Executive Offices: Woolworth Bldg., New York 7, N. Y.

PLAYING PERCENTAGES PAYS OFF ON CAUSTIC, TOO!

But it's no gamble in the purchase of caustic soda! Columbia-Southern has shown customers how the investment for equipment to handle liquid caustic soda in higher concentrations can result in savings that range all the way up to \$35,000 annually.

At one time, liquid caustic soda could be shipped only in concentrations up to 50%. Then Columbia-Southern pioneered the development of tank cars to handle 73% concentration—and also perfected a patented system of unloading at customers' plants. Since more caustic can be handled per carload, the savings to customers can be appreciable.

Most large volume users were quick to take advantage of the availability of 73% caustic. But since there are numerous factors involved, the desirability of a change-over was not readily apparent to others, especially where smaller volumes were required. Through its Technical Service, Columbia-Southern has analyzed the individual situations of its customers, enabling many of them to effect savings that quickly exceed the costs of equipment involved.

Yes, playing the percentages is good business for users of caustic soda—and is additional evidence of the value of Columbia-Southern policies of alert, progressive service to customers.



**COLUMBIA-SOUTHERN
CHEMICAL CORPORATION**

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY
420 DUQUESNE WAY, PITTSBURGH 22, PENNSYLVANIA

CHLORINE, ALKALIES AND RELATED PRODUCTS
OFFICES IN PRINCIPAL CITIES

INTERNATIONAL OUTLOOK

BUSINESS WEEK

AUG. 22, 1953

A BUSINESS WEEK

SERVICE

So many events are popping in so many places that it's difficult to keep your eye on the central threat in the international outlook: the gathering Soviet campaign to split the Western alliance.

Moscow's continuing hope, remarks the London Economist, is that the democracies will "revert to their curious habit of putting the best possible construction on their enemies' intentions and the worst possible on their friends'."

Last weekend's Soviet note on Germany hints at Kremlin strategy. Certainly its terms for unification of Germany are unacceptable—to Germans as well as the West. Moscow must have known that.

It seems to some observers that the Russians aren't ready to accept any immediate solution in Germany or Austria or Korea.

Instead, the grand design seems again to be to throw all these problems into one big five power world peace conference—something like the Berlin Congress of 1878.

The Berlin conference settled a raft of unrelated problems stemming from the Crimean War between Russia and Turkey, in which France and Britain had intervened. If you stretch the parallel far enough, there's some similarity between the roles played by South Korea today and Turkey in the 1870s.

The Soviets think that such a conference would offer a fine opportunity to isolate the U.S., tempting Europeans and many Asian nations with profitable, individual deals.

That approach was a recurring element in Malenkov's policy speech two weekends ago (BW-Aug.15'53,p27).

Malenkov is counting on a failure of the Korean political conference—with the threat of resumed fighting—to get a majority of United Nations members behind such a full-dress parley.

Indeed, some people this week are wondering whether there ever will be a Korean political conference. The opening United Nations discussions aren't encouraging.

It's the old cleavage between Europe and the U.S. on Far Eastern matters, something Andrei Vishinsky will do his best to expand:

- The British and French say, in effect: Let's not have another Panmunjom, with the two belligerents haranguing each other from opposite sides of a square table. Instead, call a round-table meeting of all the interested parties, including the Soviet Union and India.

- The U.S. insists on limiting the conference to belligerents and to Korean problems alone. Our position is fairly rigid, thanks to commitments to President Rhee. It leaves little room for maneuver.

There's a strong chance of a compromise, to be sure. But there's also a possibility of a stalemate.

That would come when no one in the U.N. could get a two-thirds majority for his views on the political conference.

In that case there might be no political conference. We'd try to settle the Korean war in a limited military armistice parley, with no political questions raised.

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

AUG. 22, 1953

The French strike wave is skirting dangerously close to violence this week (page 31). A reluctant French cabinet backed Premier Laniel's decision to stand firm.

Meanwhile, Frenchmen are caught between two fires in Morocco.

For years, France has ruled by playing the Berbers off against the Arabs. Now that policy seems to be backfiring, partially due to a religious quarrel. The Berber chieftains, who have backed France, are set to depose the Arab Sultan, who has been chafing under French rule.

If the French go along with the Berbers, they'll have Moroccan nationalists and the entire Arab world on their necks. If they back the Sultan, they'll inflame hordes of Berber tribesmen.

It's next to impossible to assess the news from Iran at midweek—except that it's hopeful for the West.

If the royalist Gen. Zahedi can make his coup stick, the danger of Iran's slipping behind the Iron Curtain will abate. A lot will depend on the disciplined Communist cadres. From first reports, they haven't yet showed their hand.

One thing is certain: It's now or never for Iran. The next few days will decide whether Iran is to maintain an uneasy independence—with a strong pro-Western tint—or continue down the road to communism.

At least investors are optimistic. They were giving Anglo-Iranian Oil Co. shares a run-up on the London market in hopes of an oil settlement under a new regime.

British businessmen, like their Japanese colleagues (page 100), are looking toward rapidly expanding Chinese trade.

The flow of commerce is still small, but many firms are making plans for the future. Some respectable businessmen visited Peking recently. The results were disappointing. But the travelers insist that it's good business to cultivate a large potential customer.

For the present, British-Chinese and British-Soviet trade is just a drop in the bucket.

It's not because of our restrictions on export of strategic goods. Rather, Britons report a lack of available goods in the East: Crop failures and the needs of the home front leave little for sale abroad.

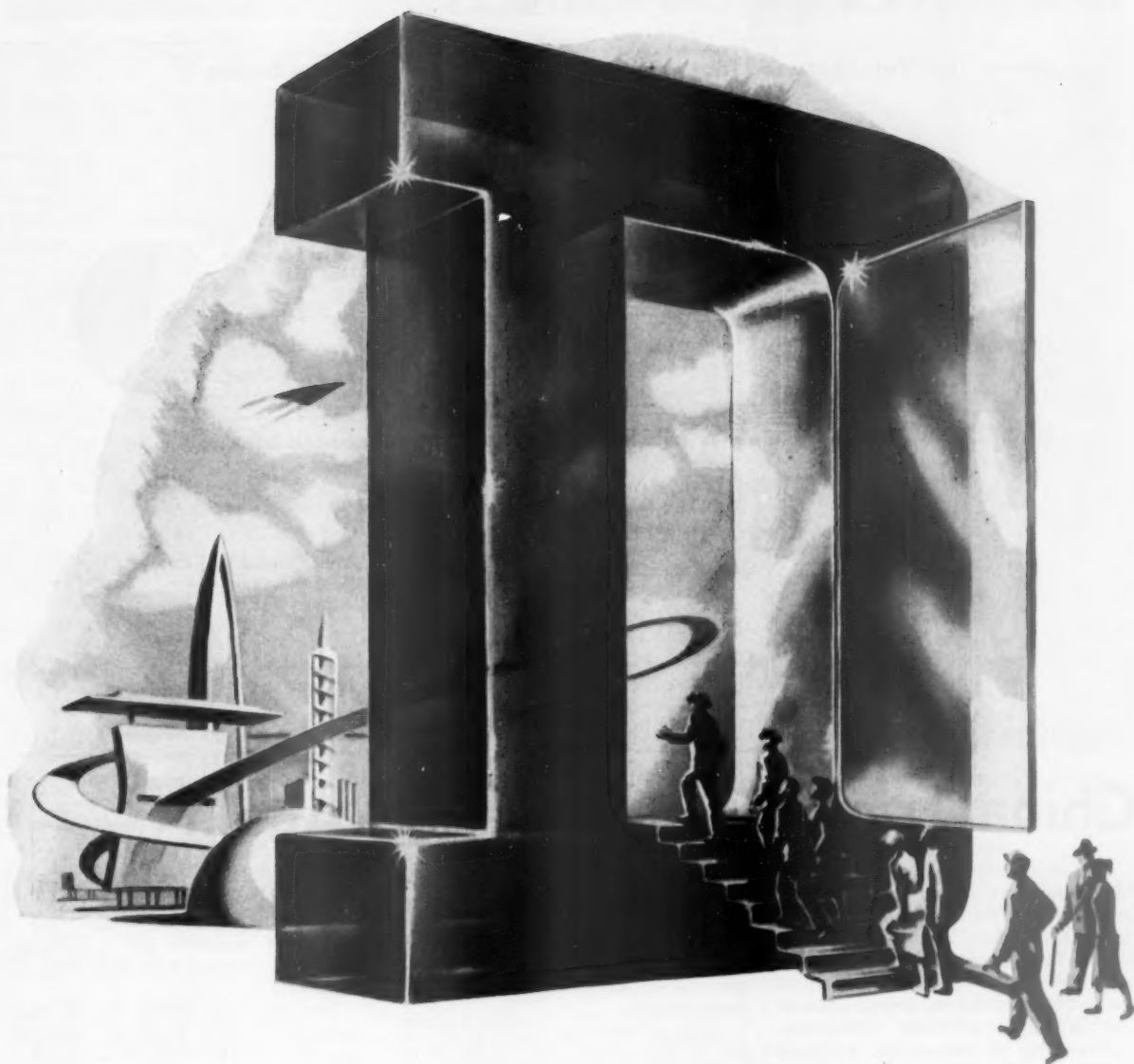
Businessmen incline to think that the Communists can free plenty of goods any time they choose. Government officials in London remain skeptical—thanks to their annual experience negotiating trade deals with Communist bigwigs.

There's this interesting angle to trade with Red China: Europeans are saying that "we'd better prepare for the China market or the Yanks will get there first."

Businessmen abroad don't accept the idea that Communist countries are definitely out of bounds trade-wise. They don't believe American business thinks that, either.

On the contrary, many say that U. S. companies are actively preparing for China trade.

Europe is full of rumors of large U. S. shipments to China via Japan, Hong Kong, Thailand.



Opening the "Door to a Better World"...

The Davison Chemical Corporation offers three keys opening the door to a better world. *DIVERSIFICATION* . . . establishes products which aid industry in supplying many essentials of today's world. *RESEARCH & DEVELOPMENT* . . . makes available the products necessary to meet the demands of the future. *GROWTH* . . . insures sufficient production, through building and modernization, to supply present and future needs. Davison leads in "Progress Through Chemistry".

Progress Through Chemistry

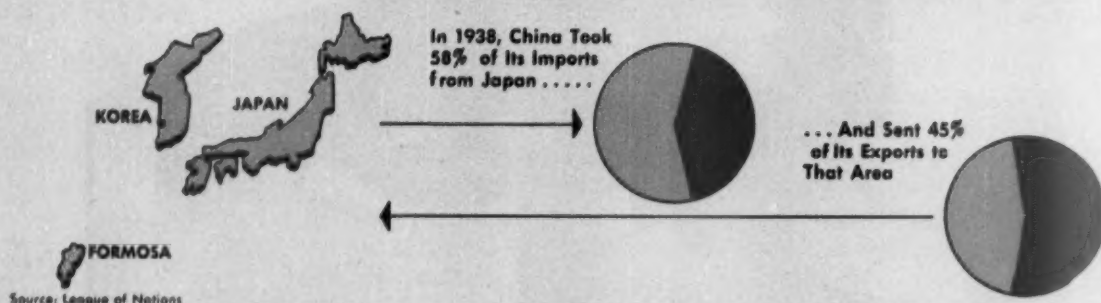
THE DAVISON CHEMICAL CORPORATION

Baltimore 3, Maryland

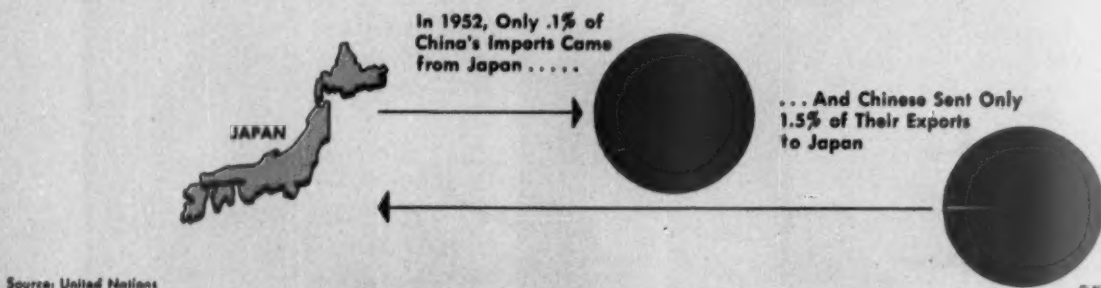
PRODUCERS OF: CATALYSTS, INORGANIC ACIDS, SUPERPHOSPHATES, PHOSPHATE ROCK, SILICA GELS AND SILICOFLOURIDES. SOLE PRODUCERS OF DAVCO GRANULATED FERTILIZERS

BUSINESS ABROAD

Before the War: China Did Most of Its Trading with the Japanese Empire (includes Korea and Formosa)



Now: China Carries On Only A Trickle of Trade with the Japanese Islands



China Trade Tempts Japan Again

One of the subtler passages in Georgi Malenkov's vast discourse the weekend before last (BW—Aug. 15 '53, p. 27) was directed to the "healthy forces" of Japan. The premier hoped they would soon cast off the shackles of American domination and resume normal political and economic relations with their "peaceloving" neighbors. He promised Soviet sympathy and support in their quest.

To Japanese businessmen, that meant trade with China—and Malenkov couldn't have picked a more timely topic. Almost to a man, Japanese now feel that business with the mainland can be a panacea for their economic ills.

To U.S. policymakers, it was one more reminder of a thorny situation that is getting worse fast. Anti-Americanism is growing in Japan (BW—Aug. 15 '53, p. 134). And our apparent intention to keep tight restrictions on Japanese trade with Communist China adds tinder to the fire.

• **China-minded**—Japanese are not much impressed by warnings that times have changed the Far East trading system, that they may be buying a pig-in-a-poke or worse. In 1938, China, par-

tially occupied, fitted neatly into Japan's "co-prosperity sphere," an almost bottomless market for Japanese goods (chart, above). Today, Chinese trade is state-controlled and Soviet-oriented, a political weapon as well as an economic phenomenon.

Japanese, however, feel they can take care of themselves. The sentiment for pushing China trade is snowballing.

• **Bandwagon**—The sentiment has always been there, especially since the Korean war cut trade down to a trickle. But this year Japanese have been able to sell a bit more to China, some \$2-million worth in the first quarter, and appetites are whetted. Small businessmen, whose profitable U.S. Army procurement orders were cut down several months ago, have been in the van of the China trade drive. Now, with the Korean shooting over, big business is rushing to join up. Travelers from Red China are swamped with invitations from the best industrial circles to wine and dine, talk over China's problems and prospects, and make new contacts.

Sino-Japanese trade promotion groups, once impoverished and beyond the pale, are now important organizations, showered with business contribu-

tions. The Diet (parliament) League for the Promotion of Japan-China Trade until recently included only a handful of legislators; now it is a supra-party organization with well over 300 members.

The press has spoken up; all major newspapers carry pro-trade editorials. And it's reported that businessmen in other free nations—such as India and Britain—have offered to engineer triangular trade deals among themselves, China, and Japan. Other businessmen on the outside are for increased Japan-China trade for a simple reason: They see less competition in world markets for their own products if Japan were busy concentrating on juicy markets in China.

• **Political and Economic Points**—Japanese, as well as some other partisans of growing China trade, reject the Washington thesis that no trade should be allowed that would even indirectly build up China's war-making potential. In fact, they even suggest that trade would help break Peking away from Moscow. With the end of the Korean war, Japanese claim that the political argument for restricting trade is gone.

In addition, Japanese claim serious

economic difficulties that China trade alone might help. The argument is this:

- **U.S. special procurement** for Korea, a lifesaver for Japan's inflated economy, will certainly decline. Dipping dollar receipts will put a severe strain on Japan. (Few, however, add that Japan needs a thorough-going fiscal housecleaning, plus unpopular austerity measures.)

- Japan is already losing out to European competitors in other areas—a bitter battle for markets is sure to come. Behind this are the disappointing results of Japan's trade drive into Southeast Asia. Despite the availability and cheapness of labor, Japan's export prices are still far too high.

- If Japan doesn't trade with China, its natural market, it will lose out forever to West Germany, Britain, and others. Japanese are making much of the upsurge in British and German sales in China.

- Japanese complain of uncertainty and indecision of U.S. policy—the question of whether Washington will continue to underwrite their present living standards with aid and military spending.

- **Attraction for Industries**—When you get down to specific industries and businessmen, China trade takes on rosy promise. Textile machinery makers, faced with dwindling business at home, see repair plus new equipment orders from China's large cotton industry. Bicycle makers expect a flurry of orders. The dyestuffs industry, with no exports now, hopes China will return as its largest customer.

On the other side of the coin, the whole range of Japanese industry is counting on big saving from imported Chinese raw materials—coal, iron, foods, and so on.

- **Government Role**—All this adds up to terrific pressures on the Japanese government, which has been trying to stall the issue. Tokyo has hoped for both U.S. aid and freedom to trade with China. It is looking for purchasing guarantees from the U.S., as well as lower tariffs on Japanese goods in the U.S.

But a recent, unanimous Diet resolution for promoting China trade has forced Premier Yoshida's hand. Now the Japanese foreign office must seek some kind of U.S. agreement to ease the embargo on China. The Japanese are especially bitter because they feel they are under tighter trading restrictions than many Western European nations.

You can get some indication of the Japanese foreign office's tactics from

this incident: Recently it assured the U.S. that it had passed on to the Ministry of Finance and the private banks a warning against dollar financing of exports to China. The warning was to include a reminder that the penalty could be the confiscation of Japanese bank assets in the U.S.

But no one told the banks. They were finally notified through private channels—and they stopped financing some trade.

Observers in Japan see only two possible explanations for the foreign office's action: (1) the widely held belief in Japan that the nation is so important to the U.S. that Washington wouldn't dare take such drastic action, or (2) that the failure to notify was part of a Machiavellian plot to keep Japanese leaders from being criticized for co-operating and at the same time embarrass the U.S. by making it suddenly responsible for confiscating assets.

- **Plausible**—There's no doubt that, on the surface, Chinese trade looks lucrative: A giant and ambitious nation, in the throes of industrialization, needs a whole range of capital goods, fuels, raw materials, medical supplies, and chemicals. Its total trade is a little over \$2-billion. And while communism has re-routed upwards of 70% of Chinese trade to the Soviet Union and Eastern Europe, the Russians have been hard put to supply China's needs.

That trade pattern, say the Japanese, could change. Moreover, they argue that sound politics demand that we stop treating China as if it didn't exist. Business contacts with the West are essential if China is ever to renounce its Soviet ties and become a peaceable citizen of the world.

- **Drawback**—There's no doubt that China could manipulate its trade to make it very tempting for Japan. But that would carry great dangers, too. Peking could use trade to twist Japan's political tail just as soon as business came to depend on it.

That's the way the U.S. tends to view the problem. Moreover many policy planners believe that China's ravenous appetite for industrial goods may be putting a severe strain on the Moscow-Peking brotherhood. We'd like that strain to continue.

- **Determined**—Japanese, up against the economic wall, either can't or won't see that side of the picture. They even overlook the endless administrative difficulties small traders already are meeting in dealings with Chinese state trading concerns. Their answer is that when trade grows in volume, and gets into the hands of big Japanese companies, details will work themselves out.



for cold fastening

Four wedge-shaped fingers hold this all-plastic refrigerator shelf support in its mounting hole. The pin or ramrod is hammered home through the button's hollow center until it spreads and locks the fingers tight. Non-chipping and less expensive than metal, these shelf supports are molded by United-Carr in many different shapes and sizes. They can be made to order in special shapes and colors.

Thousands of different fasteners and allied devices are designed and manufactured in volume by United-Carr for leading manufacturers of appliances, automobiles, aircraft, electronic equipment, furniture. If special-purpose fasteners can help speed assembly or cut costs in your business, you'll find it pays to consult United-Carr — FIRST IN FASTENERS.

Consult your nearest United-Carr field engineer before your new designs are frozen for production. It is during this all-important planning phase that you can make most effective use of our specialized engineering and development services.

UNITED-CARR

United-Carr Fastener Corp., Cambridge 42, Mass.

MAKERS OF DOT FASTENERS

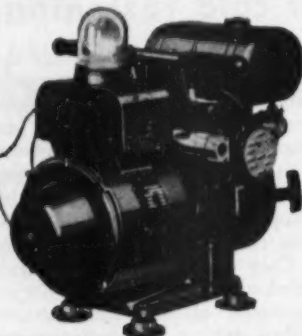
KOHLER ELECTRIC PLANTS



Independent source of electricity for any task, anywhere

PORTABLE AND MOBILE

On-the-spot electricity saves time and cost on hundreds of jobs. Low-cost portable models operate carpenters' power saws, drills, sanders, plumbers' pipe threaders and cutters, hedge and tree trimmers, public address systems, excavators, draglines, electro magnets, fire and repair truck equipment. Provide light and power for hunting and fishing lodges, cottages, trailers, concession trucks.



MODEL 1.5M25, 1500 watts, 115 volt AC. Manual control. Also 115 volt DC. Other sizes, 500 watts to 30 KW.

STAND-BY

Kohler plants take over critical loads automatically when storms or accidents cut off central station power. Models for homes, farms, hatcheries, greenhouses, hospitals, theatres, stores, communication systems, fire alarms, airports.

SOLE SUPPLY

For ranches, motor courts, oil drilling rigs, pipe lines, lumber camps, tunnels, mines, work boats.

Write for folder 21-G

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT
ELECTRIC PLANTS • AIR-COOLED ENGINES
PRECISION CONTROLS

Capital for the Commonwealth

Semipublic corporation, led by a group of Britain's top businessmen, will promote investment in dollar-earning industries in undeveloped parts of sterling area.

One of Britain's constant worries is holding the Commonwealth together. If this group of nations is to remain a political and economic unit, Britain must provide the capital that underdeveloped member nations need to carry out programs designed to earn, or at least save, dollars. This week in London, a group of Britain's most important business and financial figures are at work on a scheme to find that capital.

They are members of the management board of the Commonwealth Development Finance Corp., a part-public, part-private organization formed last January to finance sound Commonwealth projects "relevant to the balance of payments problem."

To carry out this program, the corporation has a capital of £15-million (\$42-million) and borrowing power up to £30-million. The Bank of England subscribed 45% of this; the balance came from private banks and insurance companies.

• **Disagreements**—Viscount Bruce, of Melbourne (one-time Australian prime minister and a leading figure in British financial circles), who was one of the chief instigators of the plan, doesn't think this is enough: "We aren't thinking big enough or moving fast enough." But other members disagree. They argue that direct financing by the corporation is only one of its aims; that the contacts, experience, and prestige of the board members will help the corporation find capital for sound projects without dipping into its own resources.

• **Management Board**—If contacts, experience, and prestige are what's needed to attract foreign and domestic capital, the corporation should have nothing to worry about. The management board's chairman is Sir Frederick Godber, chairman of Shell Petroleum. Other members: Sir Geoffrey Heyworth, chairman of Lever Bros.; Sir Robert Sinclair, Imperial Tobacco Co. chairman; Sir Ernest Openheimer, South African gold mining magnate; Ivan Stedeford, chairman of Tube Investments Ltd.; Humphrey Mynors, director of the Bank of England; Sir Edward Peacock, Baring Bros. director; and Richard Fleming, head of Robert Fleming & Co., bankers.

• **Dollars Wanted**—One of the board's main projects will be to attract American investors to Commonwealth projects. As Lord Bruce recently explained

to the American Chamber of Commerce in London, "I hope the corporation may give confidence to the ordinary investor in the United States and attract a great flow of corporation and private investment of worthwhile schemes in the British Commonwealth."

Actually, the board isn't counting on any wild rush of American investments at the present. But it figures that if business activity eases up a bit in the U.S., there'll be a revived interest in foreign investments, and it wants to make sure that the sterling area will get its share.

The basic economic thinking behind the corporation is that the unbalanced economy for the free world is the chief cause of inconvertible currencies. The only cure for this in the sterling area is the expansion of food and raw material production to cut down its dependence on supplies for which it must pay out dollars. And even more than this, say the program's backers, the sterling area should increase its dollar protection demands. To further this argument, the board cites last year's Paley Commission report that the U.S. will need ever increasing supplies of raw materials from abroad in the years to come (BW—Jun. 28 '52, p160).

• **Wasted Capital**—A less publicized reason for setting up the corporation is the feeling that a large proportion of Britain's postwar exports of capital to the Commonwealth have been wasted. Instead of easing the sterling area's balance of payments difficulties, they have sometimes made them worse. Too often, British loans or direct aid have gone into high-cost secondary industries at the expense of profitable primary industries. In Australia and South Africa, for example, capital and labor have been drawn away from the mines and the farms. But it's the mines and the farms that are those countries' best dollar earners.

• **All for One**—This point was hotly debated at the January conference of Commonwealth premiers. At that time, it was formally declared that all future development should be considered in relation to its effect on the balance of payment of the sterling area as a whole, not of just the individual country involved. The Commonwealth Development Finance Corp. was formed before the month was over, with that dictum a vital part of its policy.

The British government, whose only

official connection with the group is through the Bank of England's subscription, backs the corporation strongly for these same economic reasons. But politics comes into the picture, too. London is convinced that it will be extremely difficult, if not impossible, to hold the Commonwealth together politically if it is forced to cut off the expansion capital that the less-developed members need.

• **U.S. Aid**—Since the war, Britain has been spreading capital throughout the Commonwealth on a big scale—an average of about £200-million a year. But this has been possible only because of the vast amounts that Britain has been taking in through U.S. loans and aid.

Large-scale U.S. loans and aid to Britain, as elsewhere, are now coming to an end. And so, says Chancellor of the Exchequer Richard A. Butler, Britain must find another way to keep up the flow of capital into sound, dollar-earning projects within the Commonwealth. It's clear to him that the amount the British government will be able to supply is limited, so he's backing the new corporation as the best source now available.

• **Will It Work?**—No one can predict with any accuracy how much success the corporation will have in its drive for investors. The management board has just met for the first time. But both official and unofficial Britain are optimistic. At the Vienna meeting of the International Chamber of Commerce in May (BW—May 30 '53, p126), British businessmen-delegates said that the new corporation might—to some degree—take the place of the International Finance Corporation that the World Bank and the United Nations have been talking of setting up. Some went even further out on the limb: They thought the corporation might eventually take over some of the projects the World Bank itself is financing.

Be that as it may, one thing is sure. The corporation's £15-million capital and £30-million borrowing power is no indication of its intended scope. With the financial backing it has, it will certainly be able to raise a lot more money than that if its initial operations prove to be successful.

The Pictures—Benyas-Kaufman—113; Bettmann Archive—110; Black Star—82; Bob Isear—47, 58, 59, 122; Rudolph Leppert—108 (top); Archie Lieberman—32, 33; Jean Rayburn—132 (rt.); Topical from Gilloon Agency—31; U.S. Navy official photo—66; Sam Vandivert—54; Wide World—28, 29, 92, 108 (bot.), 111.

NEW SOLNUS OILS GIVE YOU MORE LUBRICATION PER DOLLAR

*New Multimillion-Dollar Plant
Producing Better General Lubricants
at Moderate Prices*

They can be used for lubrication of plain bearings, antifriction bearings, linkages, slides, cams and gears; in gear boxes, hydraulic systems, circulating systems, industrial diesel engines, compressors.

They can be used for longer periods because they resist oxidation, prevent rusting and corrosion.

They can be applied by any method used in general lubrication.

They have extremely low carbon content. In compressors, for instance, any carbon that does form is soft and fluffy, is easily blown off, does not build up.

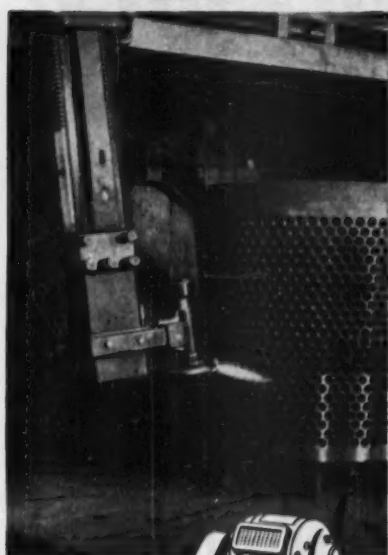
For technical bulletins, call your nearest Sun office or write SUN OIL COMPANY, Philadelphia 3, Pa., Dept. BW-8.

**INDUSTRIAL PRODUCTS DEPARTMENT
SUN OIL COMPANY**



PHILADELPHIA 3, PA. ♦ SUN OIL COMPANY LTD., TORONTO & MONTREAL

DUMORE tools
can do more!



Only a
DUMORE Grinder
could solve this
production problem

A Dumore Tool Post Grinder provided the only practical, low-cost, mechanical method of grinding these unusual-shaped workpieces. Mounted on a vertical boring mill, it halved former production time for grinding on the perforated, tapered surface of 43" diameter cast iron strainer cores.

Dumore Tool Post Grinders have answered the grinding needs . . . and slashed costs for hundreds of manufacturers. Mounted on any machine tool . . . turret lathe, planer, milling machine, shaper, boring mill or universal grinder . . . you get regular machining benefits plus grinding operations.

More, these grinders often pay for themselves on the first job. They cut labor costs . . . increase machine capacity . . . improve product quality.

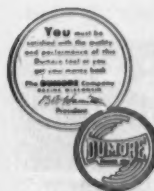
Why wait for delivery of special-purpose grinders—you can get the same benefit at less cost with a Dumore Tool Post Grinder — today! Ask your nearby industrial distributor, or write

DUMORE PRECISION TOOLS

— The Dumore Company —

1331 Seventeenth St.
Racine, Wisconsin

Tool Post Grinders • Flexible
Shaft Tools • Hand Grinders •
High-Speed Drilling Equipment



Germans Sell India a Steel Mill

Krupp and Demag snag contract to build a \$150-million steel mill . . . Switzerland and France pool forces on an airport . . . Sales of European cars spurt in U.S.

India is to have a new \$150-million steel mill. It should be no surprise to the world business community that West Germans have nailed down a contract to build and help finance it.

A big modern mill has been a gleam in Indian eyes for years and a number of foreign investors and technicians have been looking into the project. Finally the Germans—specifically Friedrich Krupp & Co. and the Ruhr firm of Demag (Deutsche Eisen Metall, A. G.)—struck a deal. "We have," announced an Indian official, "the greatest confidence in German efficiency."

Krupp and Demag, a producer of heavy machinery, will head a group of German firms involved in the project. They'll have a \$20-million investment in the mill; the World Bank and the Indian government will cover the rest of the cost. The plant is expected to produce 500,000 tons yearly at the start, swelling Indian steel production by nearly one-third. Later, if all goes well, output will be pushed to a million tons.

• **German Strides**—The steel mill agreement, initialed in Bonn last weekend, is one more sign of German penetration into Middle East and South Asian markets. Krupp last week began work on a cement plant in India; it was Krupp, too, that submitted a proposal for a bridge across the Bosphorus in Turkey (BW—Aug. 1 '53, p78). In Egypt, Germans are in on the ground floor in Premier Naguib's industrial planning. Elsewhere in the Middle East and Asia German technicians and salesmen are swarming over dams and bridges, factories, and highway projects. It's getting so many businessmen in other countries almost wish Krupp would go back into arms production and take the heat off them in overseas markets.

agreement was reached whereby the airport acreage, on French soil, would be internationalized, and hooked up with Switzerland by a 3-mi., free customs highway, also internationalized. The agreement made it possible to enter either country directly from the airport.

That was three years ago. Now the \$10-million facility is nearly finished; 10 airlines are already using it. Frenchmen and Swiss run the show jointly and everybody's happy.

Foreign Car Sales Up New Registrations

	First Five Months	
	1952	1953
Total Foreign	10,469	13,632
MG	2,401	3,246
Hillman	1,668	2,061
English Ford	1,473	1,961
Jaguar	1,071	1,775
Austin	2,110	1,658
All Others	1,746	2,931

Auto Imports Gain

Sales of foreign cars in the U.S. are on the upswing. Registrations for the first five months of 1953 were about 30% above the figure for the same period last year (chart), according to Automotive News. However, the foreigners' percentage of the market dropped: U.S. makes scored a 37% rise in registrations during the same period.

The importers feel that, despite the percentage picture, they have a good gain. Shooting for only a minute share of the market, they are happy as long as their volume climbs.

The gain was pretty general: All of the top five European makes marked up increases except Austin. Austin figures its decrease of 452 was mostly due to the hustling of one of its chief competitors, English Ford. U.S. Lincoln-Mercury dealers have been pushing English Fords and they've moved into third place with a 500-unit gain. Austin hopes to recoup part of this drop with its first sports car, the Austin-Healey, which just hit the U.S. market.

Biggest gainer in the first five months was the small, speedy MG sports car. With no direct competitor in price or

International Airport

There's a lot of talk about "integration" in Western Europe, but real accomplishments are few. The Schuman coal-steel pool is one. The Basle-Mulhouse airport is another.

The Swiss city of Basle and the French city of Mulhouse, 20 mi. apart, each wanted a modern airport. In spite of customs and other barriers separating the two nations, city fathers decided that the smart thing to do would be to build an airport in common. An

size among U.S. or foreign models, this two-seater increased its first place lead by nearly 850 registrations.

BUSINESS ABROAD BRIEFS

Guatemala seized its second big chunk of United Fruit Co. plantation acreage last week when it took over 174,000 acres on the Caribbean coast. It had already appropriated 250,000 acres on the Pacific Coast last February as part of its agrarian reform program. Unifruitco will appeal the seizure to Guatemalan president Jacobo Arbenz, who's the final arbiter. He rejected the company's appeal on the first seizure.

Intercontinental Hotels Corp., New York affiliate of Pan American World Airways, has opened a \$3-million hotel at Maracaibo, Venezuela. The 150-room Hotel del Lago is the ninth unit in the fast-growing IHC chain (BW-Mar.28'53,p167).

British exports to the U.S. hit a record monthly high of better than \$42.5-million in July, according to provisional Board of Trade figures.

Japanese snared a \$300,000 contract to supply high-voltage insulators to the Bonneville Power Administration. The bid of Nippon Gaisha, Ltd., Nagoya, was \$108,000 below that of the lowest domestic bidder, Porcelain Products, Inc., Parkersburg, W. Va.

Oil notes: Socony-Vacuum Oil Co.'s Peruvian subsidiary applied for more than 2-million acres of exploration concessions in the Amazon area of Peru, east of the Andes. It's the second U.S. oil company to apply for concessions in the area, which looks like the best bet for big-scale oil development in Peru. Texas Petroleum Co. applied for a 2.5-million acre concession there this spring (BW-May23'53,p146). . . . Arabian American Oil Co.'s output hit a new monthly high of 909,667 bbl. in July. That's 10,000 bbl. above Aramco's previous high, set last June.

Trans World Airlines, Inc., may sell its 40% holdings in the Italian airline, Linee Aeree Italiane, S.A., to Italian interests soon, reports Aviation Week, a McGraw-Hill magazine. Big reason: LAI wants a government subsidy so it can extend its operations; foreign management of the line stands in the way.

Most powerful radio station in the world has begun broadcasting in the Philippines. It's the new 1-million-watt Voice of America transmitter at Poro Point on Lingayen Gulf.



NEED STORAGE SPACE?

ADD ON A TRUSCON READY-MADE STEEL BUILDING

This manufacturer did it. Adding a Truscon Standard Steel Building to his existing plant brought raw materials and rail siding under roof. It provided support for a travelling overhead crane. Now, materials are protected, movement is speeded up, congestion relieved in the original building.

It's economical, too. Truscon Standard Steel Buildings are mass manufactured in a wide range of standard designs. You can adapt them to your floor layout needs, and to your building budget. They're low in cost, are quickly erected, have good salvage value, and can be disassembled and re-erected as your space needs change. As permanent structures, they offer fire resistance, low upkeep, and high investment value.

Take a minute today to write us your anticipated storage, production, or revised floor layout requirements. Truscon engineers will be glad to suggest the building package you need, and help you select. And, we cooperate with your local contractor to get speedy erection of your Truscon Ready-Made Steel Building. That's Truscon "Speed-Erect" Service. It's at your service now. Free descriptive booklet helps you plan. Write:



TRUSCON STEEL DIVISION

REPUBLIC STEEL CORPORATION
1076 ALBERT ST. • YOUNGSTOWN 1, OHIO
Export Department: Chrysler Bldg., New York 17, N.Y.

TRUSCON® a name you can build on

dependable
good looking
PEERLESS
"6601"
4-Drawer
Filing Cabinet

Superior design and construction features assure long, dependable service and extreme ease of operation . . . full welding and cross supports provide rigidity . . . all drawers move easily on ball and roller bearing suspension slides . . . smart modern styling blends with any office.

These 4-drawer cabinets are available in a wide range of colors in both letter and legal size widths. See your Peerless dealer, or write to us.

Write for new Peerless Catalog . . . on your business letterhead, please.



PEERLESS
STEEL EQUIPMENT CO.

8610 Hasbanc Ave., Philadelphia 11, Pa.
New York • Chicago • Dallas • Los Angeles



Domestic
GAS HEATERS
UNIT HEATERS
FLOOR FURNACES
CENTRAL HEATERS

JOHN ZINK COMPANY
4401 S. Peoria Tulsa, Okla.

TRAVELETT

How do YOU handle TRAVEL EXPENSES???

American Cyanamid, Western Electric, Lionel Corporation, scores of leading corporations, for years have used TRAVELETTERS because they

- ✓ ELIMINATE expense checks
- ✓ IMPROVE expense procedure
- ✓ LESSEN internal costs
- ✓ CONTROL travel expenses
- ✓ INCREASE productive time
- ✓ MINIMIZE cash advances

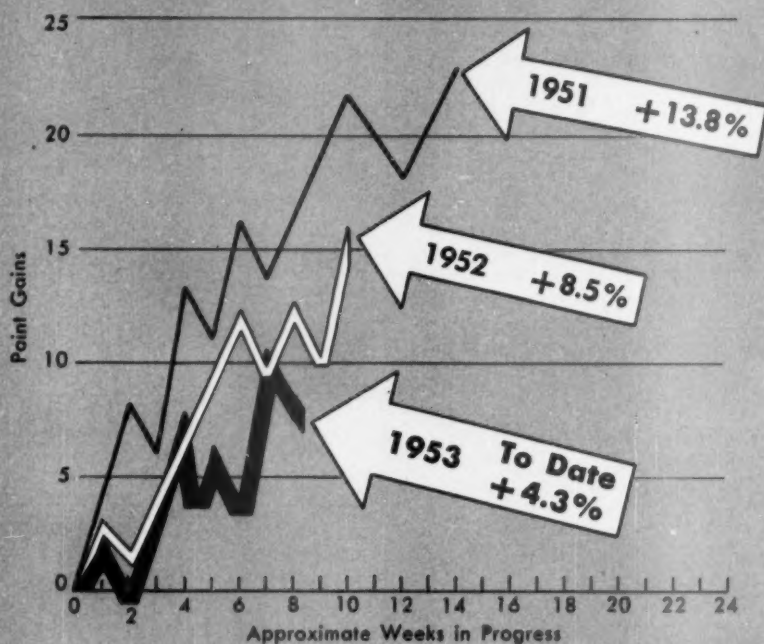
You'll be amazed at the advantages your company and traveling personnel will enjoy by using TRAVELETTERS! Write for information.

TRAVELETT CORPORATION
Since 1894
GREENWICH, CONN.

THE MARKETS

This Year's "Summer Rally" Versus Those of 1951, 1952

Standard & Poor's 90 Stock Daily Average



Traders Ask: Where Is It?

This year is breaking the pattern of summer upturns. And that's breaking the ranks of the optimists. There are fewer and fewer bulls around.

That much ballyhooed 1953 "summer rally" had better start to blossom out if it is to go down in Wall Street's record book as anything but a technical burp.

That's more than the verdict of the Street's bearish elements. Even the most fervent of the bulls have finally started to face the facts. And if you take a glance at the chart above you can see just why.

It indicates:

- To match the results of 1952's summer rally—really nothing to write home about—this year's seasonal upswing will have to find some way over the next few weeks to double the percentage gain it has managed to chalk up thus far.

- To equal the score of 1951's really invigorating June-October upsurge, today's gains will have to be more than tripled.

That's not to say that since the current rally started under way two months ago all individual stocks have performed as listlessly as Standard & Poor's 90-stock daily price average.

• **Winners**—Institutional buying of du Pont, Corn Products Refining, American Tobacco and other tobacco shares, General Electric, Union Carbide, and a few others has produced some handsome individual gains. Utility issues, a favorite "defensive group," have also done well in recent weeks.

Much less happy, however, has been the fate of an even greater number of shares. Several important members of the motors, steels, oils, industrial and farm machinery, and nonferrous metals have been under pressure.

Indeed, this week saw both General Motors and Chrysler selling close to their lows of the year—respectively as much as 17% and 28% under their

1953 highs. Also at new lows or bumping previously established 1953 lows—and showing losses in the 15%-30% range—were U.S. Steel, U.S. Rubber, Allis-Chalmers, Barber Oil, Borg-Warner, Fairbanks Morse, International Harvester, Air Reduction, American Smelting & Refining, Rayonier, Masonite, and Johns-Manville.

Especially disappointing, moreover, has been the recent price action of the rails. While their performance has been far superior to that shown by most in-

dustrial issues, they have been revealing definite drooping tendencies.

This exhibition has probably hurt Wall Street's morale more than anything else.

• **Outlook Cloudy**—Where do we go from here? That's still in the lap of the gods. But many of the Street's smarter crystal ball readers aren't optimistic. Early this week, they claim, Big Board trading proceedings were showing the "tired feeling" that so often in the past has preceded sharp price declines.

1953 Summer Rally: The Score to Date

Stock Group	Start of Rally*	Range Since High	Low	Recent Level	"Summer Rally" Gains Maximum	Gains Now
Agricultural machinery.....	132.3	138.3	136.3	134.6	4.5%	1.7%
Aircraft manufacturing.....	193.6	202.8	192.0	202.8	4.8	4.8
Air transport.....	309.2	321.3	308.4	319.8	3.9	3.4
Automobiles.....	217.8	224.3	218.1	222.8	3.0	2.3
Auto parts, accessories.....	155.9	158.9	153.7	158.9	1.9	1.9
Auto trucks.....	110.0	114.2	107.0	109.5	3.8	-0.5
Bituminous coal.....	338.7	409.1	393.2	393.2	5.2	1.2
Building materials.....	156.1	160.8	156.7	160.8	3.0	3.0
Carpets, rugs.....	114.6	115.8	110.4	113.4	1.0	-1.0
Chemicals.....	236.5	255.9	239.2	255.9	8.2	8.2
Confectionery.....	120.9	126.2	121.8	126.2	4.4	4.4
Copper.....	148.6	150.7	144.9	145.6	1.4	-2.0
Department stores.....	252.4	263.3	254.3	262.0	4.3	3.8
Distillers.....	362.2	387.4	372.7	384.6	7.0	6.2
Drugs—ethical.....	162.7	173.0	163.2	173.0	6.3	6.3
Drugs—proprietary cosmetics.....	135.1	\$146.1	137.5	146.1	8.1	8.1
Electrical equipment.....	171.0	\$185.8	175.0	185.8	8.7	8.7
Fertilizers.....	400.2	407.4	384.8	407.4	1.8	1.8
Finance companies.....	148.2	154.7	148.3	152.0	4.4	2.6
5¢, 10¢, \$1. chains.....	119.3	122.9	119.0	122.9	3.0	3.0
Food companies.....	156.0	165.1	157.6	165.1	5.8	5.8
Food chains.....	269.1	\$291.5	271.5	291.5	8.3	8.3
Glass containers.....	116.4	124.7	117.1	123.0	7.1	5.7
Gold mining (U. S.).....	58.4	59.2	57.7	58.8	1.4	0.7
Lead, zinc.....	94.7	98.5	95.3	98.4	4.0	3.9
Leather.....	166.7	168.7	166.7	166.7	1.2	...
Machine tools.....	193.9	206.2	195.0	206.2	6.3	6.3
Machinery.....	164.9	171.0	165.6	170.2	3.7	3.2
Mail order and general chains.....	246.1	251.4	247.1	251.4	2.2	2.2
Metal containers.....	107.1	115.7	109.1	114.4	8.0	6.8
Metal fabricating.....	181.6	\$196.4	183.3	187.3	8.1	3.1
Mining and smelting.....	115.1	119.9	116.1	118.4	4.2	2.9
Motion pictures.....	141.8	156.6	144.5	156.6	10.4	10.4
Natural gas.....	214.3	226.3	216.2	226.3	5.6	5.6
Office and business equipment.....	240.5	255.0	246.0	255.0	6.0	6.0
Oil—Crude producers.....	634.4	672.2	640.0	672.2	6.0	6.0
Oil—Integrated companies.....	266.8	288.9	275.0	288.9	8.3	8.3
Paper.....	562.1	605.3	575.3	602.2	7.7	7.1
Printing, publishing.....	117.1	118.9	113.8	116.3	1.5	-0.7
Railroads.....	166.4	176.9	168.5	173.9	6.3	4.5
Railroad equipment.....	101.4	103.8	101.2	103.2	2.4	1.8
Rayon.....	332.3	351.9	332.2	351.9	5.9	5.9
Shipbuilding.....	234.0	237.4	229.8	237.4	1.5	1.5
Shipping.....	544.1	562.5	547.4	560.8	3.4	3.1
Shoes.....	121.1	125.1	121.9	125.1	3.3	3.3
Soft drinks.....	105.8	108.1	104.7	106.3	2.2	0.5
Steel.....	187.8	198.0	191.3	197.1	5.4	5.0
Sugar.....	91.7	91.7	90.2	91.7
Textile weavers.....	223.3	235.7	225.7	235.0	5.6	5.2
Tires, rubber goods.....	445.4	471.3	445.8	469.1	5.8	5.3
Tobacco.....	89.4	97.8	91.0	97.7	9.4	9.3
TV electronics.....	264.3	290.3	264.9	290.3	9.8	9.8
Utilities.....	116.0	121.8	116.5	121.8	5.0	5.0
Vegetable oils.....	181.8	188.3	**180.1	180.1	3.6	-0.9

Data: Standard & Poor's Weekly Stock Price Averages (1935-39 = 100).

* June low.

New 1953 high.

** New 1953 low.

America does business on NEKOOSA BOND

America's leading printers and lithographers will tell you that Nekoosa Bond takes a perfect impression on their presses—just as it makes a perfect impression on your customers. Specify Nekoosa Bond—in clean, bright white and eleven attractive colors—for your letterheads, envelopes and most other business forms.

Nekoosa-Edwards Paper Co.
Port Edwards, Wisconsin

BOND
Nekoosa
MADE IN U.S.A.



... it pays to plan
with your printer



PROBLEM 1: The Brotherhood of Carpenters & Joiners has an aging membership, may become a union of "old men."



PROBLEM 2: Wood is taking a back seat to metals and new, fireproof materials. Taller buildings are calling for steel. Sheer necessity is the reason . . .

Why the Carpenters' Union Is Tough



SURPRISE: George Meany (left)—AFL president—last week accepted the resignation of William Hutcheson and his carpenters' union from the federation.

This is the seventh in a series of appraisals of major American unions.

Looked at one way, last week's meeting of AFL's executive council, preparing for the federation's annual convention, made sure that the first such conclave over which George Meany presided may look like a disaster.

Such a view would be based on the standard that bigness is the great desideratum of a labor organization. The council paved the way for kicking the 70,000-member International Longshoremen's Assn. out of AFL (BW—Aug. 15 '53, p142) at the same time that it accepted the resignation of the 822,500-member Brotherhood of Carpenters & Joiners. Almost immediately, AFL will be a substantially smaller organization under Meany than it was under William Green, his predecessor.

But looked at another way, the leaner AFL has gained great strength. Its position against corruption in ILA gives the federation a moral authority over its affiliates that it could never before attain. Putting teamster Dave

Beck into the vacancy on the executive council created by the withdrawal of carpenter William Hutcheson brings into the "club" a vigorous organizer whose freewheeling operations threaten the jurisdiction of some of the AFL crafts. And prompt acceptance of the carpenters' union resignation was a clear indication that Meany intends to run the executive council and not, as was Green, be run by it.

• **Not As Before**—"Big Bill" Hutcheson has threatened before to take his union out of AFL. Such a threat, in the past, always brought Green running—promising whatever Hutcheson wanted, being abjectly deferential, appeasing to the limit. Such treatment gave Hutcheson, in effect, a veto power over AFL policy.

But this time, Hutcheson was taken at his word; the AFL president did not plead with him to reconsider. It was a declaration of independence for Meany. And it is a blow to the long-held dominance of the building trades unions over AFL.

I. Fight for Survival

Among the oldest, biggest, and strongest of the U. S. unions, the building craftsmen have, for a long time now, felt insecure in an era of industrial unionism. The Brotherhood of Carpenters & Joiners, largest of the crafts, has had to fight—and fight bitterly—for its separate existence. Its relative security of today was attained through militance and strife—much of it involving employers, but most of it directed at other unions.

It has faced—and is still facing—many problems. For one thing, the average age of its members is abnormally high. New, young members are not coming in fast enough.

Young men became skeptical of carpentry as a career decades ago. Perhaps they saw that wood was taking a back seat to other construction materials. Buildings were getting taller. This called for steel. And there was a growing accent on fireproofing—also a blow to wood. There were fewer and fewer jobs for skilled carpenters as the years went by.

The introduction of machine-milled standard parts made the situation even worse. But the brotherhood didn't stand idly by. It stepped in and flatly claimed jurisdiction over all jobs in which wood is—or ever had been—utilized.

• **Battles**—Competing unions didn't take this lying down. The carpenters have had long-standing jurisdictional disputes with unions of machinists, iron workers, and the sheet metal workers. Over half the disputes over contract enforcement between the carpenters

and contractors arise out of jurisdictional battles for craft ascendancy.

Carpenter statesmen have never followed a policy of containment. The brotherhood has always had a voracious appetite for the jurisdictions of other unions that border on the unbounded domain it claims. One of the bitterest jurisdictional battles of labor history involved the carpenters and AFL's Amalgamated Sheet Metal Workers.

Beginning in 1925 with the introduction of metal trim for moldings, the battle lasted for years. Each union figured its own members should get exclusive rights to handle the trim. AFL sided with the sheet metal workers, but the carpenters refused to yield. In the end, AFL reversed itself and acknowledged the brotherhood's jurisdictional claim over metal trim.

The carpenters enjoyed other victories, too. In 1914, AFL gave the International Assn. of Machinists jurisdiction to install machinery in factories. The carpenters fought it with such vigor that AFL didn't try to enforce its decision, and IAM left the federation.

• **Court Fight**—One phase of the war between the carpenters and machinists landed the carpenters in court, and resulted in a very significant decision for all of labor.


When cross-fire between the two unions prevented Anheuser-Busch, Inc., from completing a new brewery, the company brought an antitrust suit against the carpenters. The case was fought through to the Supreme Court, which finally decided that the carpenters' union wasn't conspiring to restrain trade within the meaning of the antitrust laws. The effect of the decision was virtually to make unions exempt from antitrust actions.

II. Boss Carpenter


The man responsible for most of the union's strife as well as its victories is hulking, tough old William Levi Hutcheson. "Big Bill" Hutcheson ruled the carpenters' union with almost absolute powers for 37 of its most important years. The union's personality today is pretty much indistinguishable from Hutcheson's.

Last year, at the age of 78, Big Bill said: "I feel old age creeping up my back. I can't stick around forever. I might as well retire now." With this valedictory, he handed over the scepter, orb, and royal prerogatives of one of the world's largest labor dynasties to his 56-year-old son and heir, Maurice Albert Hutcheson. Veteran labor leaders recall no case in labor history like the Hutchesons—nor any union like the carpenters, for that matter.

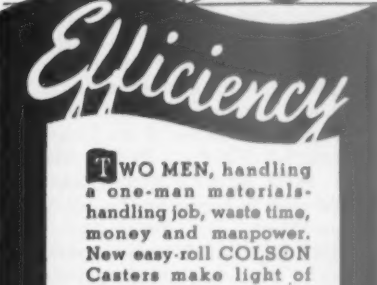
The powers that Big Bill passed on to his son are considerable. Under the



Colson CASTERS



Increase



Efficiency

TWO MEN, handling a one-man materials-handling job, waste time, money and manpower. New easy-roll COLSON Casters make light of heavy loads—let you shift that second man to another job.

COLSON engineers, with years of successful experience in materials-handling problems, are glad to help you select the right wheels or casters to bring your old rolling stock up to date. Write us or consult the "yellow pages" (under "Casters" or "Trucks—Industrial") for the COLSON office near you.

THE COLSON CORPORATION
ELYRIA, OHIO

Please send free catalog—"Colson Casters"

Name _____

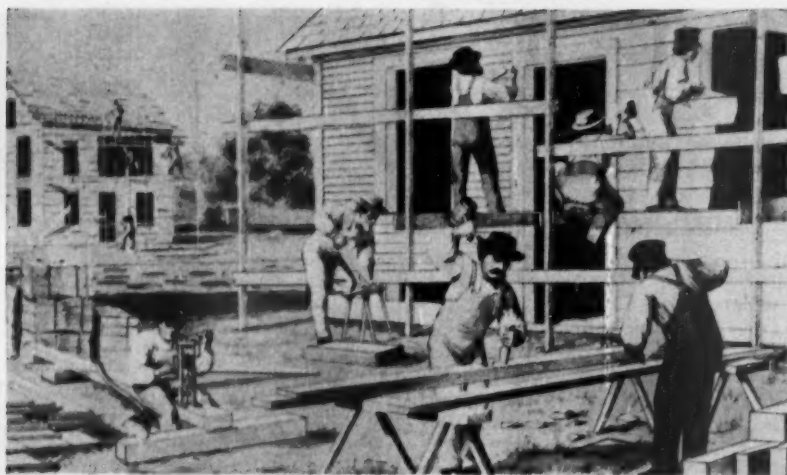
Position _____

Company _____

Street _____

City _____ Zone _____ State _____

THE COLSON CORPORATION
ELYRIA, OHIO



WOOD—and carpenters—had the building field more to themselves 50 years ago than they do now. Their skills then were in high demand.

carpenters' constitution, the president can issue and revoke charters, suspend locals and district councils and any union officer.

• **A Quieter Man**—It's doubtful, though, that Maurice (pronounced Morris) Hutcheson will exercise these powers to the extent his father did. Despite similarities in appearances, the two men are very different. Both Big Bill and his son are 6 ft. 1½ in. tall. The father weighs 225 lb.; Maurice, 210. Both are Republicans, and both are Masons in high standing. But their personalities are dissimilar. Gray-fringed Big Bill is warm, gruff, outgoing. Maurice, whose gray-streaked black hair lies back in a pompadour, is a colder man, taciturn, reserved.

• **Inheritance**—When Bill Hutcheson took over the presidency of the carpenters in October of 1915, the union had 200,000 members in 1,800 locals and a deficit of \$10,000 to \$15,000 a month. Maurice got a union of over 800,000 members, with 37,000 apprentices, in the U. S., Canada, Alaska, Puerto Rico, and the Hawaiian Islands. There are now some 2,800 locals, and the union has \$13-million in the bank.

Maurice's promotion to the presidency hoists his salary from \$20,800 as first vice-president to \$30,000. His father, as president emeritus, will continue to collect \$30,000 a year—voted by the union's 1950 convention.

III. Carpenter Bargaining

The carpenters' relations with employers are generally good—particularly in the cases of those they have been dealing with for years. Like many craft unions, the carpenters find their employers in accord with them on the principle of the closed shop. In the building industry, particularly, it helps control cutthroat contractors who deal

with nonunion men. It also cuts down on much of the confusion of hiring.

But collective bargaining between the brotherhood and the building trades employers hasn't provided a particularly stabilizing force in the industry. Craft traditions and jealousy, ultra-conservative leadership, and the nature of the subcontracting systems discourage experiments in stabilizing the industry. When it comes to wages and working conditions, the carpenters' militance puts them well ahead of the majority of labor organizations.

• **Pay**—The carpenters' pay rates vary by towns and areas from around \$2 to something over \$3 an hour. Wages are always basic issues in contract negotiations.

While wage rates are relatively high, the nature of the construction industry limits the work tour to 36 to 40 weeks. Despite this, the union has always been in the vanguard of the shorter hours movement. In the 1880s the carpenters pioneered the eight-hour day and were the spearhead of the AFL drive for shorter hours.

Though nearly all wage rates are negotiated on an area basis, the union signs national contracts with some big contractors, providing that the contractor will pay the prevailing rate in any given area.

• **Employer Groups**—For the most part, the carpenters' bargaining is carried out with employer associations. But lack of strong, permanent employer associations (particularly among contractors) has hurt the industry. Weak employer associations have led in some cases to one-sided bargaining and even hold-up practices by the union.

On the other hand, where there have been strong organizations on both sides, there have been some equally bad results: Union and management have been accused of collusion and un-

ethical and uneconomical practices.

• **Protection**—Because of the seasonality of their jobs and short life of the work year, the carpenters have slipped into their contracts every possible protective clause. Typical is the contract a carpenter might find in the Milwaukee area. It provides that all mortising for locks and hinges, and all installation of hardware, be done on the job rather than be preassembled in some factory. There are also restrictions against working on building materials made by nonunion or competing labor groups. While the purpose of these regulations is protective, in practice they often reduce efficiency and restrict output.

Like all craft unions, the brotherhood has had its troubles under the Taft-Hartley law. It claims the law makes it impossible for the union to hold collective bargaining elections. And the standard building trades complaint is that, in the case of a union shop, the job is often over and done by the end of the 30-day period in which a nonmember must join the union. The carpenters claim Taft-Hartley has cost them a fortune in legal fees.

IV. The Craft Approach

About as hard as it fought jurisdictional fights, the brotherhood has battled for the principle of craft unionism against industrial unionism. It was over this issue that Big Bill Hutcheson had his famous brawl with John L. Lewis at the 1934 AFL convention. Lewis wanted AFL to go in for organization of entire plants, including production workers, instead of simply organizing the skilled crafts. Hutcheson was violently opposed: "If the American Federation of Labor," he said, "should accept the plan of the Committee for Industrial Organization—namely to organize all workers on an industrial basis—the only solution for our brotherhood would be to sever our affiliation with the federation."

At the convention, exchanges between Hutcheson and Lewis reached a climax when Hutcheson tossed a searing epithet at his opponent. Lewis hauled off and socked Hutcheson on the jaw, crashing him to the floor.

But the moral victory went to Hutcheson. The convention rejected industrial unionism, paving the way for the beginning of CIO as a separate organization.

• **Timber Fight**—The victory was not without a sting, however. The formation of CIO caused Hutcheson and his carpenters more than a little grief in the Northwest timber country.

In 1935, AFL locals in the lumber industry were united into the Sawmill & Timber Workers Union, under the



MAURICE A. HUTCHESON, 56, succeeds his father as the union's chief.

jurisdiction of Hutcheson's carpenters. A strike, called in May of that year, was fairly successful in bringing about union recognition in a greater part of the industry in the Northwest—for the first time in its history.

Trouble started when the sawmill workers were given a lower status by the carpenters' union. They paid lower dues than the carpenters, and when they were given no representation at the union's conventions, they protested long and loud with no results. Finally, in 1937, a majority of their locals withdrew from the brotherhood and established the International Woodworkers of America under a CIO charter.

Hutcheson promised the new union, with a membership of almost 100,000, "the sweetest little fight you've ever seen." He arranged for his own carpenters and Dave Beck's teamsters "to boycott CIO wood." Hutcheson's attack was relentless, but the CIO woodworkers made considerable progress and by 1940 had control of the Columbia River Basin and Oregon. This left the brotherhood's sawmill workers with their main strength in the sawmills and plywood mills of Washington.

CIO had got the best of the deal, since the center of lumber production began moving south in the 1930s while Washington production steadily declined. Another factor in CIO's favor was that lumbering operations lend themselves more readily to the industrial form of organization. The CIO woodworkers had always advocated industrial organization as against craft organization.

• **Slowing Down**—During World War II, the U.S. Conciliation Service arranged a temporary peace. Cross-raiding revived after the war, but never to the extent it had previously flourished. Most of the industry strife after that resulted from efforts by both unions

to expand outside the Pacific Northwest. During the war, the CIO woodworkers had made a brief foray into Alabama, Texas, and Arkansas. But later, organizing in the South got tougher. The woodworkers put all their chips on collateral products and organized the Masonite plant in Laurel, Miss., where half its membership outside the Northwest is located.

The AFL sawmill workers, meanwhile, ran across some snags of their own. Their organization efforts in the plywood mills were frustrated by the spread of cooperatives in the industry. The cooperatives are producer-owned, and since employees are the majority stockholders, they feel there is no reason to organize against themselves. Neither union has had any success with these plants.

At present, the CIO woodworkers have a membership of between 80,000 and 90,000 while the AFL sawmill and timber workers are static at around 50,000. The AFL group is strongest in the Puget Sound district of Washington, where it has support of AFL in Seattle and Tacoma. But the area is a declining one, while the CIO union seems to be expanding in Oregon and California—which are now the centers of production.

• **Black and White**—The carpenters have had their fair share of corruption as well as of fighting.

The elder Hutcheson has been criticized on more than one occasion for his friendship with racketeers. He has also aroused the ire of locals by peremptorily siding with employers against them on several occasions.

• **Benefits**—But Bill Hutcheson will always be remembered by carpenters for the benefits and security he has gathered for them. Along with good pay rates and jurisdictional protection, he has garnered many collateral benefits.

For years, the union has had a pension that pays a retired member \$15 a month at 65 if he has 30 years' service. This helps him live on social security payments and on his savings. Death benefits of \$600 are also paid for a 10-year-or-more man. For aged, single carpenters, the union has a home in Lakeland, Fla., where food, lodging, clothing, and tobacco are provided for the rest of a retiree's life, in lieu of the \$15 a month pension.

• **Progress**—The brotherhood now has some 820,000 members and is growing—albeit, slowly. It has recently organized some furniture shops, a few additional lumber mills—though not many, by its own admission. But the union figures it has almost 100% of carpenters in commercial and industrial building. It still has a distance to travel in organizing the home-building industry—and this is one of the challenges facing Maurice Hutcheson.

Budget Cut . . .

. . . at Labor Dept. will hit hardest at administration of wage-hour laws, state employment agencies.

The slashing of the Labor Dept.'s budget by Congress concerns both labor and management. With \$27.6-million to spend for operating expenses in the current fiscal year—\$4.8-million less than it spent last year and \$2.8-million less than President Eisenhower asked—the department says it will have to cut its staff down 12%, to around 4,800 employees. Labor and industry want to know how the pinch will affect Labor Dept. services—such as providing basic statistics, mediation, and enforcement of labor laws—they lean on.

• **The Brunt**—Some branches of the department will feel the squeeze a lot more sharply than others. Unions don't like the idea that one of the hardest-hit sections will be that most concerned with protecting workers' standards—the Wage-Hour Division, which administers wage and 40-hour-week laws. Wage-Hour will have \$1.4-million less this year than last. It will have to lay off about 300 of its 1,375 employees and close 23 of its 64 field offices. Investigations of possible violations will drop about 20%.

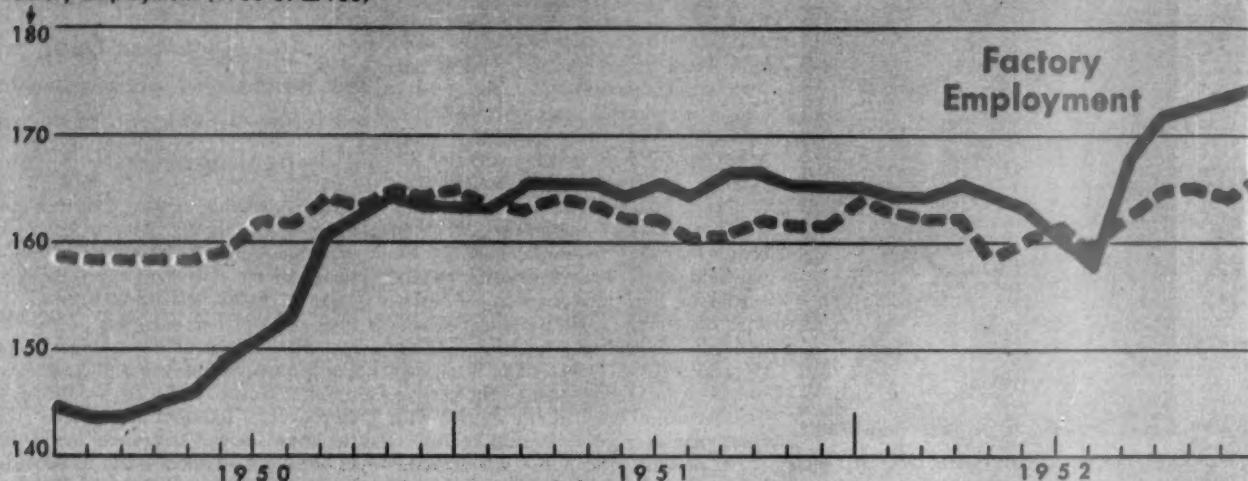
Moreover, the Solicitor's Office, which enforces these laws, was cut from \$1.8-million to \$1.5-million. With its staff reduced, it may have trouble keeping up with its job of determining prevailing wages on government construction projects and also of prosecuting violators.

Another big target of the economy drive will be the state employment agencies under the Bureau of Employment Security. Congress chopped almost \$5-million from last year's total of \$197.1-million in grants for them. As a result, it's expected that thousands of state employees will be laid off and some local offices closed.

• **Off Easy**—The slice out of funds for federal activities of the Bureau of Employment Security was a lot smaller, and the bureau sees little curtailment here.

The Bureau of Labor Statistics, with last year's \$5.8-million pared down by \$434,000, will also be hit lightly. It will continue all of its basic statistical series, and will carry through plans to work out a productivity index on "all manufacturing" from 1939 to date, excluding the war years, and also to revise its figures on housing starts. Only skimming will be on periodic surveys, such as those on community wage rates.

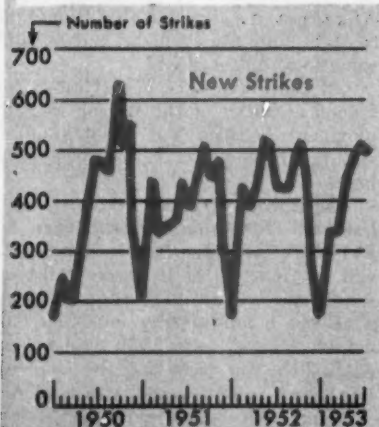
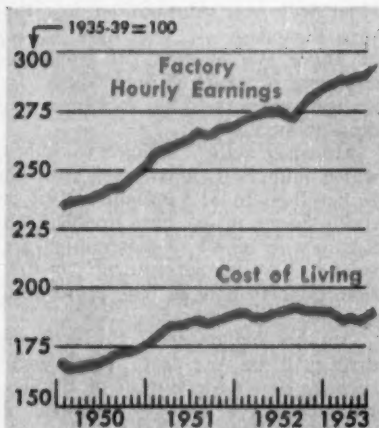
Factory Employment (1935-39 = 100)



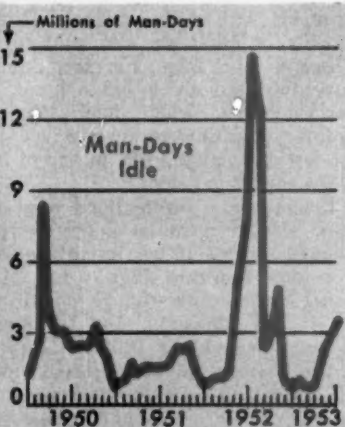
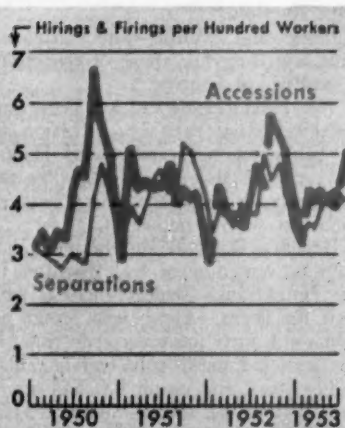
Data: Bureau of Labor Statistics.

Factory employment continued its climb in the second

A Quick Appraisal of the



Data: Bureau of Labor Statistics.



On the eve of the Korean truce, factory employment was still on the increase. It reached a total of 17.2-million in June, highest since the war began.

Meanwhile, the factory work week held steady at a fraction over 40 hours in the April-June period. As the chart in BUSINESS WEEK's quarterly series shows, weekly work hours have been on a fairly even keel throughout hostilities, while the factory work force has climbed—with an occasional slip—all over the map. Net gain over early 1950 was better than 3-million employees.

The pattern indicates that, in spite of military recruiting, the trend is toward more employment rather than more overtime when production requirements are high.

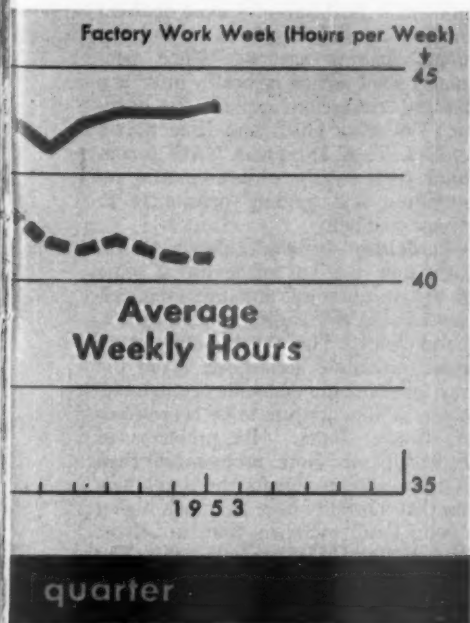
I. Earnings Keep Climbing

Earnings continued their rise to a new high of \$1.77 an hour, about a 1% improvement over the average pay in March—although more hours were worked in March.

The cost of living stuck with earnings the second quarter of the year like a Siamese twin. The old series index registered the highest living costs for the year in June, but the figure was still below the end of 1952, and only a fraction more than 1% over March.

II. Strikes Still High

Strikes in the second quarter appear to have rounded the peak and started



Labor Market

down, but they still hit a high 500 in June. As the strikes chart shows, it may take one or two more peaks to complete the "mountain" that seems to loom up every year in the work-stoppage pattern.

Man-days idle came to 3,750,000 in June. That's a jump over the 1,100,000 recorded in March, but a relatively low figure when you compare it with the 15-million man-days lost in the summer of 1952.

III. Hiring Zoom

Hirings and separations—always a zig-zag affair—took opposite directions at the end of the second quarter.

There were 5.1 new hires per 100 workers in June compared with 4.4 in March. Separations, on the other hand, turned down to 4.2 per 100 workers in June against 4.4 the month before. But separations still weren't much above the end of the previous quarter.

The month of June for years has brought a slight employment spurt over May—probably due to graduations and teenagers taking summer jobs. But the jump is generally followed by a dip in hirings in July.

The voluntary quit rate was higher than a year ago, in fact, higher than most years since 1946, a good indication that job opportunities are still good. But as more and more military reservists are released from the armed forces and returned to the labor market, the outlook may change. Workers will think twice before quitting.



OLGA MADER, UAW's recreational director, gets RAO members on television programs, as part of her job to see that . . .

Pensioners Union Grows

A young organization for elderly people is growing stronger every day in Detroit. The Retired Autoworkers Organization, which formed almost spontaneously last year under pressure from a good many auto pensioners (BW—Feb. 9 '52, p30), now has 12,000 potential members in Detroit and nearby communities. Last year, only 4,000 retired auto workers were living in the Detroit area. Nationally 28,000 CIO United Auto Workers' members have retired.

As RAO grows, so, too, does enthusiasm among its members. An RAO picnic held on a scorching day last month at Belle Isle in Detroit was attended by no fewer than 4,000 old-line unionists and their families.

• **Progress**—How far has RAO progressed since it got off the ground last year? Most importantly, it has advanced several of the preliminary "demands" it initially laid down. RAO's insistence on larger pensions certainly was a factor in the enlarged pensions granted under the Ford-General Motors contract amendment pattern. The second point in the program—extension to pensioners of life, hospital, health insurance, and other welfare provisions—also

has been granted in revised auto contracts.

Other goals—voluntary retirement, transferable pension credits—have not been achieved on any important scale, but they are appearing more often—and more solidly—in pension talks.

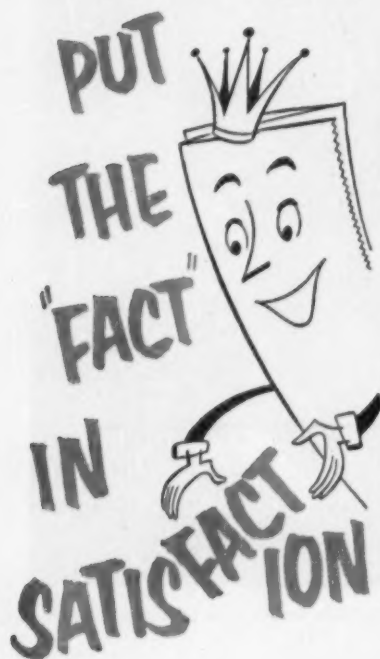
• **Outlook**—There is no way to measure the actual influence RAO has exerted on the UAW to seek economic benefits favorable to pensioners, nor is there any way to forecast RAO's future power and prestige. But the outlook is intriguing.

The membership potential for RAO is enormous. Pensioned industrial workers will probably number 10-million or more by 1960. And UAW is looking to that burgeoning pool: RAO membership is in no way limited to retired Auto Workers' members. Any CIO or AFL pensioner is invited to participate. There are no jurisdictional borders to cross.

• **Weapon for Reuther?**—For CIO and UAW president Walter Reuther, this factor may be of considerable significance. Harried as he has been by quiet maneuverings of Steelworkers president David McDonald, United Mine Workers president John L. Lewis, belligerent

NIBROC®

TOWELS, TOILET TISSUE,



Soft, absorbent, strong—everyone who uses Nibroc towels or toilet tissue says there's nothing finer. In industries and institutions all over the U. S. these quality Nibroc products are making satisfaction a fact and saving money for purchasing agents, too. Available in white or natural; towels either multifold or singlefold.



YOU SAVE BY ORDERING BOTH
Save money through quantity discount by ordering towels and tissue together. Nibroc tissue is made with a new combination of 100% pure cellulose fibres. For name of nearest distributor and towel and tissue samples, write Dept. NE-82, Boston.

BROWN



COMPANY, Berlin, New Hampshire
CORPORATION, La Tuque, Quebec
General Sales Offices:

150 Causeway Street, Boston 14, Mass.
Dominion Square Bldg., Montreal, Quebec

UAW locals in Dearborn, Flint, and elsewhere, and other dissident labor elements, RAO may provide a new weapon for Reuther. By providing a haven for hundreds of thousands of pensioners from all unions, his Auto Workers Union may eventually preside over the doings of a giant organization. Big enough, at any rate, to increase Reuther's stature greatly.

• **Political Force?**—Taking such a group and welding it into a cohesive unit may be difficult, but certainly not impossible. For one thing, RAO needs an adversary, something approximating management's usual role. Pensioners, no matter how well organized, lack the basic weapon of any union: strike action. But if they can form themselves into a firm body, they may well be able to dictate terms to union officers. And, like the Townsend movement of oldsters, which made itself felt in Washington and in state capitals during the 1930s, it can become a powerful political instrument.

UAW pensioners, and most others, have lifetime memberships in the union. As their numbers grow, so will their collective voices in union matters. A pensioners' union with a membership of millions would comprise a force neither CIO nor AFL could overlook. If Reuther at that point were to command the loyalty of RAO's members, his position within labor would be notably enhanced.

• **Paternal UAW**—RAO at the moment is too small to be entirely effective in pursuit of its aims. It has no formal organization, no officers. It is operating under the paternalistic wing of the UAW. If it has an officer at all, that would be Olga Mader, director of UAW's recreational department.

"I guess I could be called the coordinator of the pensioner program," she says.

Under her direction, RAO services and programs are being established. The pensioners union now has only one place of its own in which to meet—a "Drop-In Center," donated by Hudson local 154 on Detroit's east side. Before the year is out, UAW hopes to open two more centers, and eventually, five will be in operation at scattered points around the city.

In other nearby industrial areas such as Flint, Pontiac, Muskegon, and Grand Rapids, Mich., and Windsor, Ont., UAW locals are organizing similar centers.

• **Guidance**—For the Auto Union, which at first did not seem to realize the force it was dealing with, RAO means large tasks ahead. Earlier this summer, Michigan CIO and UAW representatives conducted an institute to train counselors in the handling of pre- and post-retirement problems. This training program is continuing. The counselors direct pensioners in need of

help to the proper agencies. If the problem is financial—and most of them are—the counselor's job is to find the proper lending agency. When pensioners want advice in health insurance matters, counselors explain the intricacies of Blue Cross and Blue Shield policies. Thus, at present, UAW is confining itself largely to disseminating information and guiding pensioners to proper channels.

• **Leadership**—It won't always be so. Even now RAO is made up of some of the sturdiest of unionites—the veterans of UAW's earliest, and roughest, picket lines. These men, steeped in union procedure and versed in all the ways of enforcing demands through collective action, are sure to be heard from in stronger tones. Its problems of leadership are more pronounced than in other labor groups for the simple reason that mortality rates are much higher among RAO members than in others. Realistically, UAW recognizes this. The protective guidance it now offers RAO quite likely will develop into the actual leadership under which the pensioners union will grow.

LABOR BRIEFS

Vested pension rights are cropping up lately in union agreements. The United Auto Workers (CIO) reports a new agreement with Udylyte Corp. covering 1,000 workers at two Detroit plants. It provides for maintenance of pension rights and credits after 10 years' service, even if the employee leaves the company before he's 65. The pension is paid at retirement.

A "Communist tinge" was blamed by James Price for his resignation as a district president of the independent United Electrical Workers. Price will join the rival International Assn. of Machinists (AFL) and try to wean 7,000 employees of Westinghouse Electric's Lester (Pa.) plant away from UE. Price's resignation could hurt UE: He headed some 12,000 members in 13 locals.

The new Atomic Energy Labor-Management Relations panel took action this week on its first major problem: the AFL Atomic Trades Council wage dispute at Oak Ridge, Tenn. (BW—Aug. 15 '53, p143). It is recommending a 7¢ raise. This is a compromise between the 10½¢ asked by the AFL council, and the 5¢ offered by the Carbide & Carbon Chemicals Co., which operates the plants at Oak Ridge. The CIO chemical workers at Oak Ridge had earlier accepted a 5¢ raise from the same company.

STAINLESS STEEL FOR BUILDINGS

McLouth STAINLESS Steel

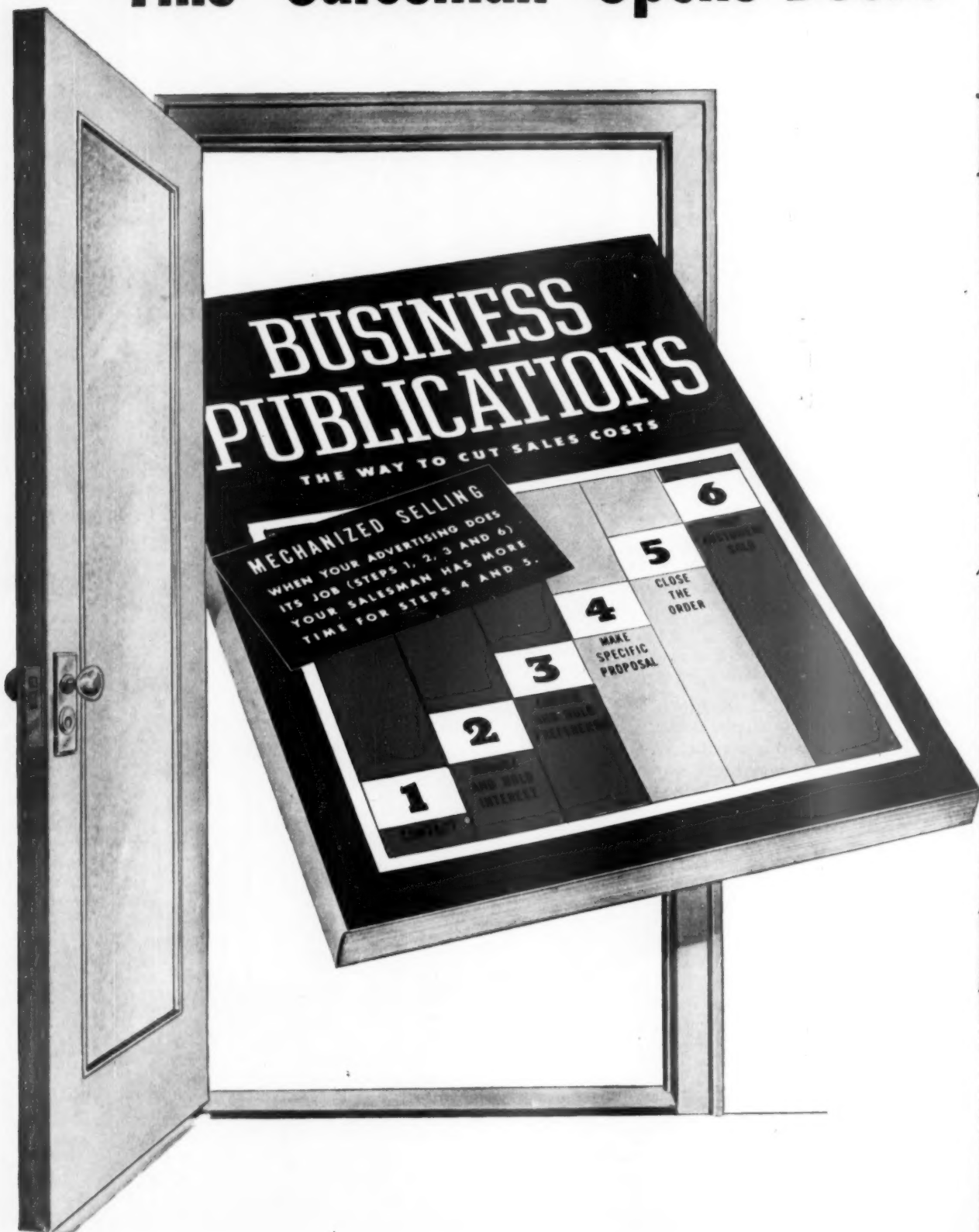
For the product you make
today and the product you
plan for tomorrow.

McLOUTH STEEL CORPORATION
DETROIT, MICHIGAN

Manufacturers of Stainless and Carbon Steels



This "Salesman" Opens Doors



...Lets Your Salesman Close Sales

Buying decisions are often the end product of many buying influences. Even the best salesman can't always be certain that he has contacted all of the men who can directly or indirectly influence the purchase of his product or service. Some of them may be unknown to him.

But Business Magazines get past closed doors. They deliver your selling message, consistently, to both the known and unknown buying influences in the plants and offices where your product can be used. We call this "Mechanized Selling" because it employs the high speed, low cost tools of advertising to make contact, arouse interest and create preference for your product.

It cuts sales costs because the salesman can concentrate on the important job of making the specific proposal and closing the sale.

And, like many other companies, you'll find that advertising in Business Magazines not only works before your salesman calls, but between his calls . . . and after his calls . . . to build your market and hold it against competition.

Ask your McGraw-Hill man for a copy of our 20-page booklet, "Mechanizing Your Sales with Business Paper Advertising!" Also about our new sound-slide film . . . "Plateau of Progress", which is available for showing at sales and management meetings.

HOW "MECHANIZED SELLING" PROTECTS TOMORROW'S MARKETS

Realizing the need for safeguarding its future markets during a period when metal production was tightly controlled, the Aluminum Company of America launched a special business publication advertising campaign aimed at design engineers.

Each of Alcoa's fabricated products was discussed in editorial-style inserts running in six business magazines serving different segments of the design field. The advertisements stressed new

applications and forms of Alcoa products and offered technical literature on request. Alcoa's aim was both to broaden the potential aluminum market and to hold its own leadership in the field.

The success of the program was amply demonstrated by the 12,756 requests for technical literature which Alcoa received from designers and producers of aluminum defense equipment—a further indication of the results of business paper advertising.



McGraw-Hill Publishing Company, Inc.

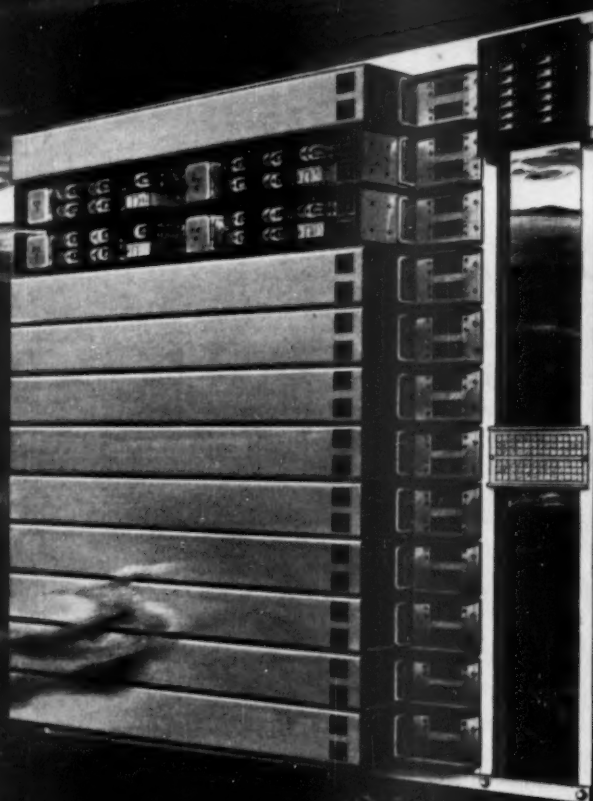


330 WEST 42nd STREET, NEW YORK 36, N. Y.

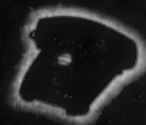


HEADQUARTERS FOR BUSINESS INFORMATION





“Long distance, please”—1953 style



Next time you place a telephone call to some distant point in the U.S.A., notice what a short time passes before the called party answers.

Chances are—if you live in one of the major American cities or towns—your call was accomplished by a remarkable “Aladdin’s Lamp” of modern engineering known as *Operator Toll Dialing*, in which one of the world’s oldest and best known telephone manufacturers, Stromberg-Carlson, plays an important part.

Time was when a long distance call from, say, Tampa, Florida, to San Francisco, California, involved operators at Tampa, Jacksonville, Chicago, Denver, Salt Lake City and, finally, San Francisco—to ring someone’s home or office. Today, the only operator involved is the one in Tampa. She

simply punches a set of keys, sending a sequence of impulses through an *inter-toll network*, and a few moments later your wife, your customer, or your home office in San Francisco is on the line.

Today’s time-saving miracle is possible because of Central Office equipment like the Stromberg-Carlson XY dial system. Switches, relays, and other electro-mechanical apparatus respond instantly to “orders” from the originating long-distance operator... set up instantaneous electrical paths from city to city and accurately finish their job by ringing the exact number *you* want.

Wonderful? Yes—but typical of a company which has been pioneering Communications methods for home and business since it made its first telephone instrument—way back in 1894. Perhaps *you* have a problem we could answer.

There is nothing finer than a

Stromberg-Carlson[®]

Rochester 3, New York

In Canada: Stromberg-Carlson Co. Ltd., Toronto

STROMBERG-CARLSON ALSO LEADS IN:



“Panoramic Vision”
Television Receivers



Office Intercom
Equipment



High Fidelity
Radios and
Radio-Phonographs



Sound and Public
Address Systems



Electronic Carillons
for Churches and
Public Buildings

PERSONAL BUSINESS

BUSINESS WEEK

AUG. 22, 1953



The average homeowner takes too casual an attitude toward burglary. He figures either that (1) the odds run high against his house being robbed; or (2) if it ever is going to be robbed, he can't do much to prevent it.

Both ways, it's dangerous reasoning—the net effect is to encourage rather than discourage burglars. That's partly why a burglary takes place once every two minutes in the U. S., and losses run into uncounted millions.

A little time and effort can cut the chances of burglary—or losses if you do have one—to a minimum. A thorough study of the precautions you can take has been set forth in a 54-page pamphlet (price: \$1) published by the Institute of Public Affairs of the State University of Iowa. Here's the gist of it:

The only way to make your house completely burglarproof would be to turn it into a fortress. However, the right kind of obstacles will slow down the most skilled burglar. And it will dishearten the juveniles and casual criminals.

Home burglars usually specialize. For example: The "matinee" burglar operates during the afternoon, when women are likely to be out.

The simple prowler may pose as a peddler. He will steal anything he can while you are out of the room. If no one is home, he'll steal whatever he finds lying around the yard—including the wash off the clothes line.

Three out of four burglaries occur at night, follow a wide variety of patterns. The so-called "hot" burglar prefers to break into a house where he knows for certain his victims are at home. He gets in noiselessly, works fast when the occupants are asleep.

One kind of "hot" burglar actually prefers working in the same room where people are sleeping. He can keep his eye on them, make his escape before they wake up fully enough to know what's happened.

The "second-story man" operates in a part of the house he thinks is vacant. He can work easily elsewhere while you are watching television or doing the dishes. (A variation of this type is the "party" burglar. He operates in one room with the noise of the party in another to cover him.)

Your best protection against burglary is to make your home hard to break into. First step: Get adequate locks for windows and doors.

All good manufacturers make excellent jimmy-proof locks. In general, these are not only snap locks, but also will "deadlock"—that is, you can completely lock or open the door with only the proper key.

Put such locks on all your outside doors—maybe your inside cellar door as well. (Getting into cellars is a snap for most burglars.)

Remember this: It does no good to lock three out of four doors well. Any burglar will certainly find the fourth door and come through it.

It's tougher protecting windows than doors. Even if they have good locks, windows can be opened by breaking glass quietly (covering it first with adhesive tape) or cutting it. Nevertheless, a good lock itself will hamper a burglar—perhaps enough to discourage him completely.

Always hook screens and storm windows from the inside. That's an

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

AUG. 22, 1953

added hindrance. And don't count on your second-floor windows being safe. Trellises, large vines, even rough stone work can easily get a man upstairs.

Here are some other protective measures:

- **Fencing even part of your yard can be discouraging.** Burglars like a clear path of escape. A heavy, barberry hedge will help, too, particularly if you run a few strands of barbed wire through the middle of it.

- **Leave the bathroom light on** when you go out in the evening. (Burglars ring the doorbell when they see a light. If a light is on in any other room, they are sure the house is empty if no one answers. They can't be sure when only the bathroom light is on.)

- **Rely on a good watchdog.** That doesn't mean a large, vicious animal, but a small, alert dog that will bark whenever an intruder approaches.

- **Don't be a hero and try to catch a burglar** if you wake up and find him in your bedroom. Pretend you're still asleep until he goes, then call the police. Any other course may cost you your life.

Soon you'll be able to cash personal checks in almost any hotel, whether or not you are known. What does it is a new credit-card system announced this week by American Hotel Assn. It will go into effect Sept. 15.

There will be two types of cards. The "Chekard" will be issued to individuals with satisfactory credit records. It gives check-cashing privileges at any of the 6,000 AHA members in the U. S., Canada, Mexico, Alaska, Puerto Rico, Hawaii, and Bermuda.

Holders of Chekards can cash \$100 worth of checks a week for a charge of \$6 a year; \$200 a week for \$9; and \$300 weekly for \$12 a year.

Business firms will use the so-called "Travelcard." With it, executives and other employees can not only cash checks—they can also charge all hotel bills. The fee is \$5 a year for each Travelcard.

Apply for both cards either to member hotels of AHA, or to Traveletter Corp., Greenwich, Conn., a cosponsor of the plan with AHA.

One villain in heart disease is a fatty substance called cholesterol. As a person ages, it tends to collect in excess in the blood stream, is then deposited on the artery walls. That helps cause hardening of the arteries.

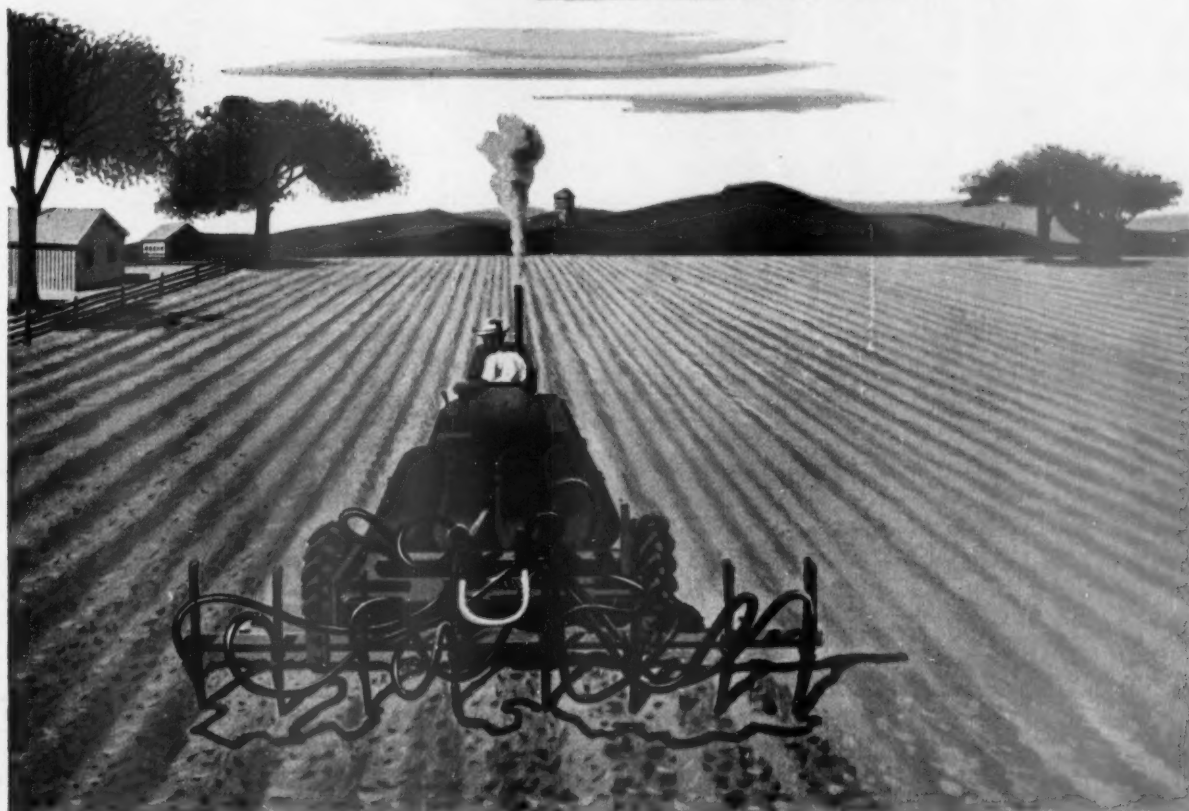
A new drug called Monichol is said to lower blood-stream cholesterol to normal levels safely and consistently. It is now available on a prescription basis.

Note for gun enthusiasts: The 1954 "Shooter's Bible," published by Stoeger Arms Corp., will be out Sept. 1. Enlarged to 560 pages, it catalogs firearms and accessories, fishing tackle, other outdoor sporting equipment. It sells for \$2.

Cost of sending one child to college for a year will take 11% off an income of \$20,000—after taxes. That's the finding of a recent study by Hugh W. Long & Co.

The figures show that four years of college cost around \$7,200 today, including tuition and living costs. In general, that's 60% above the cost of higher education in 1940.

How U. S. Rubber helps keep your breadbasket filled



Food would be less plentiful and would cost more if it were not for fertilization. But in turning out bigger and better crops, fertilization experts often run into unusual and risky problems. For example:

An increasingly important method of fertilization is plowing anhydrous ammonia into the ground, 4" to 6" below the surface. But hose is required to transfer the ammonia from bulk storage tanks to the dispensing unit and from there to the soil. The hose must be able to resist the low temperatures caused by rapid changes in pressure. It must be oil-resistant and able to withstand the permeating action of ammonia.

United States Rubber technicians were called upon to design such a hose. Armed with long experience in every kind of hose problem, they compounded a powerful single wire braid reinforced hose with a synthetic tube that withstands the highest working pressures—the ideally safe hose for handling this dangerous but beneficial liquid.

It makes no difference what your problem may be, whether in hose or any other industrial rubber item; for a quality product and for economy, call on "U. S." Our 25 District Sales Offices are staffed with sales engineers ready to help you, or write to address below.

The anhydrous ammonia fertilizer distributor shown above plows the ammonia right into the soil. It is equipped with U. S. Agrar® Wire Braid Ammonia Hose P-7130, which is available in sizes ½" to 1½".



*"U.S." Research perfects it
"U.S." Production builds it
U.S. Industry depends on it*

UNITED STATES RUBBER COMPANY
MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Hose • Belting • Expansion Joints • Rubber-to-metal Products • Oil Field Specialties • Plastic Pipe and Fittings • Grinding Wheels • Packings • Tapes
Molded and Extruded Rubber and Plastic Products • Protective Linings and Coatings • Conductive Rubber • Adhesives • Roll Coverings • Mats and Matting

MANAGEMENT



ASSISTANT TO THE PRESIDENT of Esso Standard Oil Co., Roy McPherson (right), takes a lot of the routine load off the shoulders of Stanley Hope. He's typical of the growing use of staff aides for top administrators. But some raise the question . . .

Do Top Men Need Aides?

"We don't believe in assistants of any kind, whether they are called assistant managers, assistants to —, administrative assistants or any other kind of assistants."

"A man who properly carries out the function of assistant to the president can see that matters requiring prompt decisions are given priority, thus insuring against the president's office becoming, as in many companies, a bottleneck to the expeditious handling of such matters."

Side by side, these two statements by the head men of two large companies spell out neatly a controversy that has come to the fore in the past few months: Are officially designated assistants an answer to the problems of (1) today's busy executives and (2) fashioning top management people out of junior executives?

The first statement is a paraphrase of remarks made by Ralph J. Cordiner, president of General Electric Co., at this year's annual Harvard business conference. The other comes from Stanley

C. Hope, president of Esso Standard Oil Co., chief operating subsidiary of the Standard Oil Co. (N. J.).

I. They Say Yes

On his side of the question, Hope has a lot of company. Certainly it seems that in the past few months assistants have become more and more common. Almost every day you'll find a company announcing the appointment of a new assistant to the head man or a top-level executive.

Olin Industries, Inc., has just named the former clerk of the House of Representatives Ways & Means Committee as assistant to John M. Olin, president; Bechtel Corp. appointed two new assistants to Charles T. Draney, vice-president. They'll assist in "business development."

Scott Paper Co., aiming for an increase in sales by 1958 to \$300-million (1952 sales were \$146-million), picked Francis W. Plowman, a vice-president, for the job of assistant to Thomas B. McCabe, president. His duties: "the correlation of our activities in such a

manner as to assure the highest degree of unity among the various divisions of our business."

• Military Enthusiasts—The idea of staff assistants to men with administrative jobs developed originally in connection with the military. Generals needed aides to help them run large, complex organizations.

Logically enough, two of the most persistent advocates of the staff assistant setup today are former military men. One is President Eisenhower.

Ernest Dale, a research associate for the American Management Assn. and a Columbia University professor, in his book, *Planning and Developing the Company Organization Structure*, quotes Eisenhower as saying that business "has overlooked an important opportunity to increase the effectiveness of the chief executive through a larger and abler staff of assistants to reduce his load."

The other ex-military man is Col. Lyndall F. Urwick, a British management consultant now doing research work for the American Management Assn. in this country. At the AMA



Photo courtesy John Wanamaker London Shop.

Aircraft fasteners have hidden values also



Very often it's the things you can't see in a suit that make it of good value—the quality of the canvas underbody, the skill of the stitcher, the attention paid to minute details.

The same thing is often true of a precision fastener. The difference between an SPS aircraft fastener and any other you pick may not be apparent on sight, but it is very real nevertheless.

You won't find these differences expressed in a Government specification. (After all, aircraft fasteners are supposed to meet the same standards.) You will find them rather in such things as experience—SPS has been making precision fasteners for the last four decades; in engineering know-how; in insistence on quality—one out of every 10 of the 2000 people at SPS works at nothing but quality control.

Neither a good suit nor a good fastener is cheap, but you will be wise to insist on the finest quality in both. One bad batch of screws can

cost you many times their price in wasted effort, confusion and interference with production. On the other hand, people who use SPS aircraft fasteners say they can rely on SPS inspectors as on their own.

If you have a fastener problem you will be wise to address it to STANDARD PRESSED STEEL CO., Jenkintown 57, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

SPS AIRCRAFT PRODUCTS DIVISION
JENKINTOWN, PENNSYLVANIA

Colitho[®]

BUSINESS SYSTEM



**CAN REDUCE
YOUR COST
OF HANDLING
PURCHASE
ORDERS**

Wherever paper work requires more than one legible copy, a Colitho Business System can be used to speed the operation, eliminate transcription errors, and cut clerical costs. Colitho paper offset duplicating plates, plain or pre-printed, can be incorporated in single, multiple part, flat pack or roll forms. Colitho Business Systems provide for variables and blackouts, deletions or additions. Partial information can be added at any time. All business paper work lends itself to simplification through a Colitho System.*

Regardless of the kind of business you are in, Colitho Systems offer time and money savings in purchasing, manufacturing, distributing, selling, billing and accounting. For more information, mail the coupon attached to your business letterhead.

*Where spirit duplicating equipment is used the same results can be obtained with a Columbia Ready-Master System.

Colitho Division

COLUMBIA RIBBON & CARBON MFG CO., INC.

Colitho

**OFFSET DUPLICATING
PLATES AND SUPPLIES**

Colitho Division, COLUMBIA RIBBON & CARBON MFG CO., INC.
508 Herb Hill Rd., Glen Cove, New York

Please send information about Colitho and Ready-Master Business Systems
Our duplicating equipment is Offset ☐ Spirit ☐

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

general management conference in New York this year, he and Dale explained why and how businessmen ought to learn to use "assistants to" to improve their organizations.

• **Advantages**—The reasons for the increasing popularity of the scheme are fairly obvious.

• Assistants can relieve a lot of the load on the boss.

• For the company looking for ways to broaden younger management men, an assistant's job offers a fertile training ground.

• It's one way to give title and status to jobs in cases where the function doesn't clearly offer a proper nomenclature.

• Whoever is picked as assistant can use the opportunity as a challenge to his ability, under the eye of the executive who is best able to make a judgment.

• An assistant can be his boss' eyes and ears when the crush of work makes it necessary for the boss to be two places at once.

Less tangible than these points is one many executives find important: As head man of an organization, the executive often finds himself isolated from anyone in whom he can confide. If he wants to try out an idea, it is practically impossible to test it, say, on his top operating people since once the idea is put into words it becomes something more than an idea. A good assistant can be a sounding board. And once he establishes proper relationships with the boss, an assistant can bring up all the arguments against an idea, clarify the boss' thinking, and prepare him for possible adverse reactions of a board of directors, stockholders, or—if he's a second-level executive—the top executive group.

II. Pitfalls and Cures

But even those management men who think assistants are a ready answer to their problem of keeping in touch with large organizations admit there are a lot of dangers.

Too often, they figure, a boss picks an assistant with professional vanity as the basic motive. It looks good to have an assistant sitting outside your door.

When that happens, the executive often fails to spell out in his own mind or on paper just what the assistant's job is.

In the minds of the organization, he becomes a dog-robber for the chief executive. He falls into a nebulous position that, at worst, brands him a high-level spy or confidential informer.

• **Assistants' View**—This year the AMA held five seminars for assistants to high-level executives of about 70 corporations. The seminars turned up some of the major faults these men find with

How LINDE SERVICE*...and Oxygen ARE SAVING \$2 A TON IN PREPARING FURNACE SCRAP

Preparing heavy steel scrap for open hearth furnace charging usually meant hauling the big pieces away to a safe place for blasting apart.

To speed up scrap preparation, LINDE developed an improved cutting blowpipe, called the C-60. In one mill, alone, this blowpipe, combined with new handling methods, now prepares about 2,500 tons of scrap a month. Savings have consistently been \$2.00 or more per ton over previous methods. In all, this is saving about \$60,000 a year for this mill.



● LINDE-designed oxygen cutting tools, such as this C-60 cutting blowpipe, are helping many mills save time and money in steel making. Sound engineering advice on problems of furnace tapping, surface conditioning, cutting, scrap preparation, and maintenance are provided by LINDE SERVICE.

***LINDE SERVICE** is the unique combination of research, engineering, and more than 40 years of accumulated know-how that is helping LINDE customers save money and improve production in their uses of oxygen and oxy-acetylene processes.

If your company uses oxygen, LINDE SERVICE can mean dollar savings to you. Let us tell you more about it.

LINDE AIR PRODUCTS COMPANY

A Division of UNION CARBIDE AND CARBON CORPORATION

30 East 42nd Street **UCC** New York 17, N. Y.

Offices in Principal Cities

In Canada: Dominion Oxygen Company, Limited, Toronto



Now...set
fastening studs
wherever
they're needed

MODEL 450
REMINGTON
STUD DRIVER

Here's new economy...new speed in construction fastening! The Remington Stud Driver joins wood or steel sections to concrete or steel surfaces in seconds... easily sets as high as 5 studs a minute. Powerful 32 caliber charges drive studs arrow-straight. The tool's light weight—only 5½ pounds—simplifies handling wherever studs are needed.

New guards for specific uses now make the self-powered Remington Stud Driver more versatile than ever. These attachments take all the guesswork out of stud location... assure fast, accurate fastening for every job. Illustrated are just 3 of these special guards. For full information about the complete line and about the Remington Stud Driver, send the coupon below.

*A complete line of guards
for special applications*

Guard for "Unistrut Sections"

Guard for Switch, Utility and Outlet Boxes

Guard for Conduit Clip

"If It's Remington—It's Right!"

Remington **DUPONT**

MAIL THIS COUPON
FOR FREE BOOKLET



Industrial Sales Division, Dept. BW-8
Remington Arms Company, Inc.
939 Barnum Ave., Bridgeport 2, Connecticut

Please send me my free copies of the new booklets
showing how I can cut my fastening costs.

Name _____
Position _____
Firm _____
Address _____
City _____ State _____

"... bosses asked aides to criticize officers senior in position ..."

AIDES starts on p. 122

their jobs. Among them, Urwick cites these:

- Bosses don't know how to use the job because the concept isn't well fixed in their minds.

- Assistants got their jobs without ever having had clearly defined duties, special training, or adequate experience in the line.

- Many felt they were private secretaries, not staff men with a definite organization function.

- Instead of using them to smooth over routine problems, bosses assigned their assistants to special projects. That way they didn't provide any relief from the routine executive load.

- Bosses asked them to criticize other officers who actually were senior in title and position, destroying the possibility of any working relationship.

- Remedies—There are obvious answers to the difficulties that these practicing assistants met in trying to do their jobs. One is to pick assistants out of the line organization whose experience has given them a clear grasp of what it means from the operating side of the organization to work with staff people.

Some other rules are simple enough. Bosses should put a definite time period on the assistant's tenure. A lot of assistants become disillusioned with their jobs, even though they like them, because they see themselves out of the line of promotion. Urwick recommends at most five years in such a staff position.

When an assistant is named, he should have his work defined in writing.

III. They Say No

But even smoothing out flaws doesn't cut much ice with some companies. General Electric Co., for instance, rejects the whole idea of assistants.

GE at one time had 1,400 assistants at various levels, including assistant foremen and assistant supervisors. Under Cordiner, these jobs have largely been eliminated. It's now written policy at GE that there will not be any assistants at any level.

- Too Many—It's not hard to see why GE rebelled against the idea. A raft of 1,400 assistants could become a bottleneck in any organization.

Multiplication of assistants is one major danger that even those who favor the "assistant to" system caution against. Say, for instance, the president decides he needs an assistant. His vice-president sees the scheme in operation,

decides he wants one, too. Then the vice-presidents, taking a leaf from their superior's book, add an assistant—and the chain starts down the line.

Before long, having an assistant—or maybe two or three—becomes a matter of organizational status. It doesn't matter whether the assistant is really necessary.

• **GE Thinking**—GE, in its decision to eliminate assistants, set up eight reasons why they might be required—and then proceeded to knock down all but one of these.

GE thinks that if a company is properly organized, with authority delegated as it should be, and a decentralized form of management practice, then assistants aren't necessary. The organization specialists at GE figure that a company whose executives find they need assistants are merely solving a basic organization deficiency through an expedient. Then, too, assistants give bosses a tool for keeping under their wing a lot of authority that probably ought to be handed further down the line.

As a tool for training, assistants' jobs to GE's way of thinking are no better than general staff meetings where each young management man can watch decision-making in action. Job rotation, specific training program, and individual help from top executives can be better schools for management than assistants' jobs.

Companies that use assistant titles to give status, according to GE, instead ought to (1) give the man a bigger job; (2) pay him more; and (3) dignify the line organization titles (making a man, say, a product planner rather than assistant to the marketing manager in charge of product planning). If you make a man manager of a subfunction, rather than assistant manager of the whole function, he is much more likely to stand on his own feet rather than lean on his boss for decisions.

Some other points GE makes:

• Instead of hiring an assistant to help keep tabs on subordinates, an executive should fire the subordinates that need checking. An assistant gives the executive a chance to keep his fingers on the details of a subordinate's job—something GE is striving against in its decentralization program.

• When the boss is away, an understudy taken from the ranks of operating people should be named to call the signals—not an assistant who isn't in the line.

• **Exception**—About the only concession GE makes to the whole idea of assistants is this: An assistant is O.K. for a limited period (at GE it isn't supposed to be more than six months) just before an executive retires or is scheduled to move into another job. But the assistant is expected to take over the entire job.



Meet Mr. Lyon, D. D. S.*

*** Dealer of
Diversified Services**

• LYON's national organization of steel equipment dealers serves virtually every segment of business and industry—with a diversified line of products totalling more than 1500 different standard items. (A very few are shown below.)

Factories, shops, warehouses, offices, churches, clubs, hospitals, homes—these are just a few of the many markets Lyon dealers serve with quality steel products.

Facilities also available for special contract work.

FACTORIES IN... AURORA, ILL., AND YORK, PA.

LYON METAL PRODUCTS, INCORPORATED

General Offices: 810 Monroe Avenue, Aurora, Illinois

Dealers and Branches in All Principal Cities

LYON®

STEEL EQUIPMENT

for BUSINESS • INDUSTRY • INSTITUTIONS
STEEL KITCHENS for THE HOME



A PARTIAL LIST OF LYON STANDARD PRODUCTS

- | | | | | | | |
|-------------|--------------------|-------------------|------------------------|------------------------|-----------------|---------------|
| • Shelving | • Kitchen Cabinets | • Tool Boxes | • Toolroom Equipment | • Revolving Racks | • Work Benches | • Tool Trays |
| • Lockers | • Cabinet Benches | • Lockers | • New Freedom Kitchens | • Wood Working Benches | • Bench Drills | • Rubber Bins |
| • Stools | • Storage Cabinets | • Locker Racks | • Display Equipment | • Hanging Cabinet | • Sorting Files | • Shop Boxes |
| • Bin Units | • Drawing Tables | • Parts Cases | • Flat Drawer Files | • Folding Chairs | • Drawers Units | • Shop Stands |
| • Box Racks | • Tool Trays | • Filing Cabinets | | | | |

new arrival from

CARRIER



... a small-package gas-fired Unit Heater with lusty lungs

Only 23" high—yet it has a capacity of 50,000 Btu's per hour.

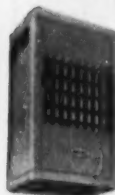
Compactness is its special asset. It provides directional space heating (with space saving) facilities for thousands of low-ceiling stores, garages, service stations, diners, vestibules, entrances, etc.

Simplicity is the key to its compactness. Gas is fired directly in the tubes of the leakproof one-piece heat exchanger, resulting in maximum heat transfer. 16-gauge ALUMINIZED STEEL is used for this rugged heat exchanger. This exclusive Carrier feature adds years of service. Gas and fan shutoffs are completely automatic.

Carrier Gas-fired Unit Heater 46T50 is typically Carrier engineered, handsomely styled, exceptionally quiet in operation and sturdily constructed. AGA-approved for all types of gas.

• **WANT MORE INFORMATION?**

Call the Carrier representative in your Classified Telephone Directory, or write to Carrier Corporation, Syracuse, New York.



Carrier Gas-fired Unit Heaters come in both propeller and duct types, in 8 sizes with capacities from 50,000 to 250,000 Btu's.



Carrier

AIR CONDITIONING
REFRIGERATION • INDUSTRIAL HEATING

Guessing Right on Costs

Companies expect the military will be tougher on costs from now on. They need dependable cost estimates more than ever. Convair has a system—and it pays.

Companies that sell to the military can expect to find it a wary shopper now that Congress has clipped the Defense Dept. budget. The stress on pinning down costs will put pressure on companies to bid accurate, detailed cost estimates.

One company that thinks it has developed an almost foolproof system for estimating costs is Consolidated Vultee Aircraft Corp.

• **Burned**—A couple of years ago, Convair decided it had to do something because on several occasions it had been burned by contracts set at figures that proved too low. Executives felt the trouble sprang partly from the fact that no single, specific group was responsible for cost estimates and forecasts on Convair products, partly from a system that failed to coordinate various parts of big-job figures. Under its old setup, each department made its own estimates. The individual figures were then slapped together to give an over-all estimate, which was then passed along without an attempt at appraisal or coordination.

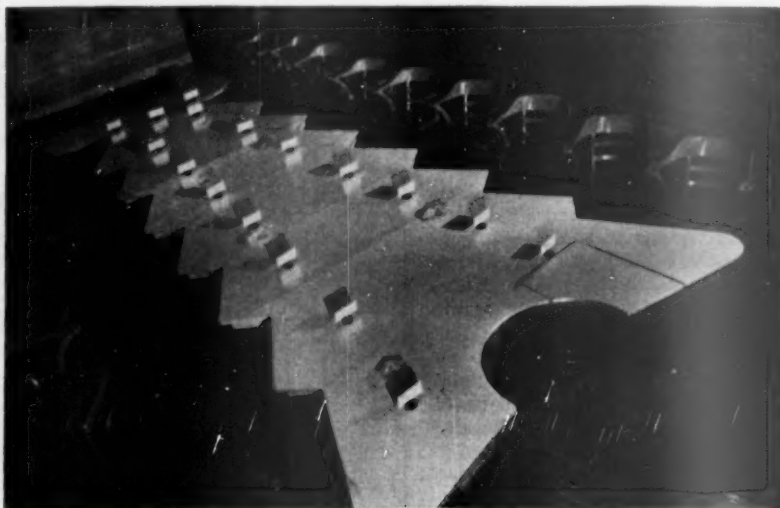
• **Into Action**—Convair got at all these flaws in one fell swoop when it set up a Dept. of Estimating with the sole task of putting price tags on virtually

everything Convair sells. Setting up a specialized group to give top management sound cost figures for contract negotiations has paid off. Every contract that has been negotiated on the basis of the department's estimates has shown a profit.

The 10-man group—now a section of the Controller's Dept.—is headed by budget man Robert C. Pederson. He has behind him a staff that he calls a miniature plant staff, ranging from an engineer and a test pilot to an accountant familiar with cost history. The team is long on Convair experience, a point stressed by Pederson because "every company does things a little differently."

• **New System**—The setup works like this: When Convair executives want an estimate on, say, an airplane, they give Pederson's group available data—rough sketches, descriptions of its functions, and so on. Often the groups must fill in missing details with assumptions on such things as the amount of electronic gear, the weight, and the kind of power plant.

Then Pederson sends each department an outline on what its part will be in making the product along with his assumptions. The departments draw



Tree-shaped Table for Training Confabs

Executives at Radio Corp. of America's Harrison (N. J.) plant have come up with this conference table that looks something like a Christmas tree. Custom-built by Korda Industries, New York, it has individual desklike sections with separate spotlights for use when training films are shown.



LATEST PLANES THAT ALWAYS WIN

Your boy may fly these soon. But don't worry... they're only toys. The worry belongs to the manufacturer. Like anyone selling fad or fashion goods, toy-makers must stock hundreds of stores with what customers want . . . at the moment they want it. To do this calls for expert shipment planning. Successful manufacturers do it this way—



Off the production line, ready to go. Delivery schedules planned in advance by manufacturer and Railway Expressman minimize shipping costs.



By using largest possible cartons, shipper saves packing time, reduces handling costs. After one phone call, whole lot picked up. More time saved.



Securely settled in modern Express cars on America's snappiest streamliners toys and thousands of other products race toward destinations.



Ready to capture the market at hundreds of retail outlets. On-time deliveries across the country help retailers keep inventories at profit-making levels.

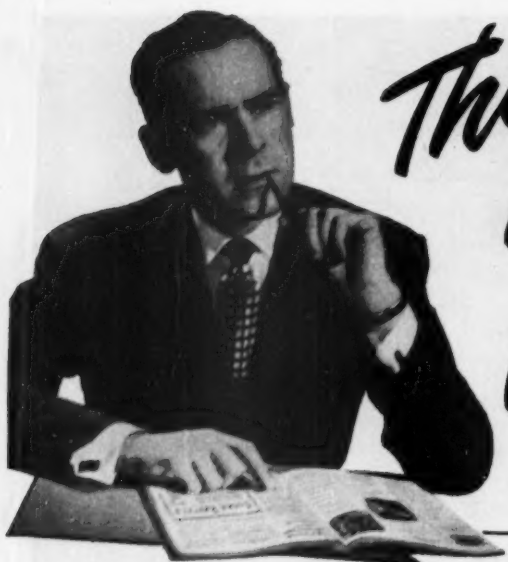


Whether you're ordering or shipping, nationwide Railway Express service can help you save time, money and effort. Call in your Railway Expressman today.

It pays to use the complete shipping service

No size or weight limit • Pickup and delivery, within prescribed vehicle limits, in all cities and principal towns • Liberal valuation allowance • Receipt at both ends • Ship collect, prepaid, paid-in-part, or C.O.D. • Ship by Air Express for extra speed.





*This
is
for ME!*

DODGE REPORTS tell you daily, what's coming up in new construction.

Dodge Reports tell you *who* to talk business with, *when* to see him and *what* about.

Dodge Reports save your salesmen's time otherwise spent beating the bushes to locate active prospects or chasing down idle rumors.

Dodge Reports give you *vital* information on opportunities in new construction you might otherwise never hear of.

For 63 years Dodge Reports have made it possible for most of Construction's top firms and salesmen to reach the right people at the right time to do business. They can do the same for you. Write **TODAY** for your free copy of "Dodge Reports, How to Use Them Effectively."



DODGE REPORTS

Dept. 85316, 119 West 40th Street, New York 18, N. Y.

Timely, Accurate, Construction News Service East of the Rockies
THE FIRST STEP IN EVERY SALE



up their own cost estimates in detail. Meanwhile, the estimates group does the same thing with a broader brush. If the figures jibe, they stand; if not, two heads buckle down to see who's wrong.

Eventually, the figures and their sources are compiled, and Pederson's group coordinates them in staff conferences. Pederson personally correlates the entire project; when it's done, he knows the reason for every figure.

• **Follow-through**—That's important, because his next move is to present and defend the figures before top management. They may overrule him on any item. Pederson's responsibility for a forecast ends with his estimate. But he sits in on all final contract negotiations—on call to spell out any figures or assumptions.

Ordinarily, the department's work is done before any engineering on a project is completed, although it follows a contract through until the last item has been delivered. Usually, Pederson sets up a bid in about two months, but some cost jobs have been turned out in less than a week.

• **Extra Job**—Along with work on specific contract data the group handles hurry-up information queries from Dayton or Washington for figures on, say, the cost of weapons in varying outputs. An evening call may get an answer the next morning. But the department stresses that these are only planning figures—not company estimates. These requests pour in fastest when the services are drawing up their budgets, again when the Bureau of the Budget goes over the estimates, and when the Senate and House committees go to work on the President's budget in appropriation hearings.

Draft Boards Getting Tougher

Occupational deferments from military service are getting tougher to obtain, but the Engineering Manpower Commission says companies shouldn't throw up their hands just because draft boards are turning down more and more requests.

In a report to members, EMC cites these figures: As of June 30, the number of Selective Service registrants deferred from active duty totaled 25,797. That's against 31,017 on Dec. 31, 1952. Prior to Dec. 31, the number of industrial job deferments remained roughly the same—around 32,000.

EMC concludes (1) there has been a change in attitude by many local draft boards because of difficulty in meeting their quotas and (2) unless there is a reversal of the present trend, the job deferment system for all practical purposes will be ended.

usAIRco
UNITED STATES AIR CONDITIONING CORPORATION
DEPT. BW, MINNEAPOLIS 14, MINNESOTA

- Store Conditioners
- Window Room Units
- Packaged Central Station Air Conditioners

Foreign Language Division
Typesetting in English
and over 600
Languages and Dialects
WORLD'S FOREMOST FOREIGN-
LANGUAGE TYPOGRAPHIC SERVICE

KING TYP
230 W. 42 ST., N.Y. 36

FOR INVESTORS:

Factually measured—The effect of
BUYING POWER vs SELLING PRESSURE
The forces controlling trends!

Write for latest Report BW covering present situation, plus other valuable data. Send \$1 to cover costs.

LOWRY'S REPORTS, Inc.
250 Park Ave., New York 17, N. Y.

"KE-CABINET"
KEEPS KEYS SAFE, HANDY

• Units available in 9 sizes holding from 10 to 400 keys. Each key has its own KE-TAG of durable, vulcanized fibre.
For further information write Cushman & Denison Mfg. Co., Dept. B-W, 153 West 23rd St., New York 11, N. Y.

See Clues on page 134



Next time...order ScotTissue Towels!

1. They drink up water like an Airedale in August.
2. They're strong — even when soaking wet.
3. They're so soft that many people use them as face cloths.
4. They're clean and white — of course.
5. They're double-fold to dry double-quick.



EVER PLAY
"GUESS THE WEIGHT"?

ScotTissue Towels have an exceptionally high fibre content. This "bulk," plus generous size and double fold, makes a case of 3,750 ScotTissue Towels weigh 46 lbs.* Some paper towels cost less for 3,750 but are 10 to 20 lbs. lighter* — hence less drying power. Write for more facts. Scott Paper Company, Dept. A-1, Chester, Pa.

*Shipping weight

SCOTTISSUE



TOWELS

Symbol of the right kind of washroom

"ScotTissue," Reg. U. S. Pat. Off.

FOREIGN COMMERCE

Just Published!

Explaining the business of foreign commerce in all its phases, this book gives you a thorough understanding of both the working of foreign commerce and the causes of its behavior. First shows you the actual practices and patterns now in operation and then looks behind the structure of this commerce to see what policies—governmental and private—and what economic factors cause it to act the way it does. Thus it enables you to better understand and evaluate the policies that influence foreign commerce and to appreciate the broader factors that affect the volume and direction of international trade. By Harold J. Heck, Prof. Tulane U. 301 pp., 16 illus., \$6.50.



INVESTMENT TIMING:

THE FORMULA APPROACH PLAN
Just Published!

This investment guide brings you a thorough understanding of formula plans and their use in an investment program. Important features of major types of plans are explained—fundamental assumptions, general operational features, buying and selling action, yield and capital appreciation, understandability, risks, and opportunities. You are shown basic differences—how to modify plans without weakening their framework. You get advice on initiating a plan, administering it economically, keeping it alive along safe, profitable lines. By C. Sidney Cottle, Prof. of Bus. Admin., and W. Tate Whitman, Prof. of Eco., Emory U. 200 pp., 45 charts, 19 tables, \$5.00.

PSYCHOLOGY OF INDUSTRIAL RELATIONS

Just Published!

Presents industrial psychology in completely nontechnical terms. Covers motivation and discontent in industry, placement, helping people learn, getting work done. Treats grievances, personal problems, making work easier, establishing fair rates. Covers relations between employees and with unions. By C. H. Lawshe, Prof. of Psych., Purdue U. 359 pp., 26 illus., \$5.50.

SUCCESSFUL LABOR RELATIONS FOR SMALL BUSINESSES

Just Published!

Prepares you to protect your interests in bargaining and disputes—even if you only employ a handful of people. Picks the best methods for you out of the actual experiences of hundreds of small businesses. Tells who you must have policy, what it should cover, how to strengthen your labor position, how to deal with trained and experienced union representatives, contracts, strikes. By James M. Black and J. George Piccoli, Associated Industries of Cleveland, 415 pp., \$6.00.

SEE THESE BOOKS 10 DAYS FREE

McGraw-Hill Book Co., 330 W. 42 St., NYC 36
Send me book(s) checked below for 10 days' examination on approval. In 10 days I will remit for book(s) I keep, plus few cents delivery, and return unwanted book(s) postpaid. (We pay for delivery if you remit with this coupon; same return privilege.)

- ☐ Heck—Foreign Commerce—\$6.50
- ☐ Cottle & Whitman—Investment Timing—\$5.00
- ☐ Lawshe—Psych. of Ind. Relations—\$5.50
- ☐ Black & Piccoli—Labor Relations—\$6.00

(Print)

Name

Address

City Zone State

Company

Position BW-8-22

(This offer applies to U. S. only)

Helping Executives Remember

More and more companies try reading and memory courses . . . New committee aims at improving economics classes . . . Harvard broadens case-study teaching . . . Exodus from New York continues.

With paperwork on the rise, executives today have to be fast readers if they don't want to get bogged down. Yet, according to the Foundation for Better Reading, a Chicago organization that specializes in reading courses, an average executive reads no faster than a sixth-grade student—263 words a minute—and comprehends less than 75% of what he reads.

Many companies are trying to help their executives get out from behind the paper stacks. Companies such as General Electric, Johnson & Johnson, and International Business Machines have used the reading courses. Right now, 70 executives of Hotpoint Co. are in the middle of a six-month reading program (BW—Jul. 14 '53, p. 73).

Other companies are going beyond trying to increase the reading speed of their executives: They're helping them to remember what they read and other details that are part of their work such as appointments, names, and faces.

Four months ago, 38 management people of New York and New Jersey metal manufacturing companies enrolled at the School of Memory and Concentration in New York, run by Dr. Bruno Furst, a German lawyer-turned-psychologist who has been in

the memory training business since his arrival from Europe over 10 years ago.

They spent two hours a week for ten weeks, developing their mental muscles through techniques worked out by Furst. He says a good memory is based on concentration and association: grouping similar facts together and then linking them by easy-to-remember mental pictures.

Recently, the "graduating" executives were put through their mnemonic paces at the Engineering Auditorium in New York to demonstrate what they had learned. They rattled off previously memorized contents of magazine pages, phone numbers, catalog specifications. To show what they could do on the spur of the moment, they recited a schedule of hourly appointments and a series of business subjects made up on the spot by the audience, then topped this mental exercise by matching names and faces of 20 people who had briefly identified themselves a few minutes earlier.

The New York and New Jersey branch of the National Metal Trade Assn., which sponsored Furst's course for its member companies, was well pleased with the results. It plans to send another management group to



Top Revere Brass

James M. Kennedy (left) was elected chairman of Revere Copper & Brass, Inc., last week to succeed James J. Russell (BW—Nov. 3 '51, p. 96), who died Aug. 1. Kennedy's post as president will be filled by Charles A. Macfie (right), former vice-president and general sales manager of rolling mill sales.



**You get extras
at three great ports—
when you use the B&O**

Whether you import or export, routing your merchandise via Baltimore & Ohio offers distinct advantages. It gives you access to America's three greatest ports—New York, Philadelphia, and Baltimore with their specialized facilities—and you can benefit by the outstanding performance of B&O's Sentinel Service.

This efficient service on fast carload freight provides accurate schedules to and from these ports through its *siding-to-siding dependability*. In addition, shippers and receivers are notified of schedule interruptions and reforwardings through its *Automatic Records* feature. Importers and Exporters find Sentinel Service an invaluable aid in maintaining a smooth flow of cargo.

Add to such precise scheduling to and from these ports, our friendly helpfulness and careful handling, and you have many reasons for routing B&O. *Ask our man!*



**BALTIMORE & OHIO
RAILROAD**

Constantly doing things—better!

clues:

TO THE SOLUTION OF MANAGEMENT MEN'S PROBLEMS.

Published every week—closes 12 days in advance. Rate—\$5.00 per line (\$2.50 per line for positions wanted ads), minimum 2 lines. Allow 5 average words as line; count 2 words for box number. Write for special rates for Business Services advertisements. Address box number replies c/o BUSINESS WEEK to the office nearest you. NEW YORK, 330 W. 42nd St., CHICAGO, 520 N. Michigan Ave., SAN FRANCISCO, 68 Post St.

EMPLOYMENT

Positions Vacant

District Chief Clerks Due to rapid expansion, two new positions are available in New Mexico and Arizona. Must have customer accounting experience with a utility firm. These positions involve responsibility for a group of offices. Age to 40. We are a natural gas utility company engaged in production, transmission, and distribution in four states. We offer a full program of employee benefits. Apply by mail to: Southern Union Gas Company, Burt Building, Dallas, Texas. Attn: Mrs. Singer.

Positions Wanted

Young American Desires Position in Spain. College — Vet — Business Administration. Speak Spanish. PW-8525, Business Week.

Free Information, Mr. President, about a man who can pay you profitably on your investment in him. Former Management Engineer with diversified management experience and outstanding record in marketing, finances, manufacturing controls, and human engineering available this Fall as General Manager or assistant. Age 39. Write for details, photo. PW-8895, Business Week.

What President—Owner Will Benefit? From: Energetic young executive, with successful record in product development, packaging, merchandising, and sales. He can "management-engineer" your company—Build your product line—Increase your sales and profits. Prefers consumer goods firm, where he can serve as "deputy" president. PW-8806, Business Week.

Wish to increase your sales? This man has impressive background in development of sales programs, hiring, training of salesmen. Market research. Public Speaker. Aggressive personal salesman. 38. For Personal Data Sheet write: PW-8878, Business Week.

Executive considering change; wide experience administration, sales management, advertising, promotion, publicity, marketing, user-dealer outlets, top-management contacts, public address, engineering; now managing officer national-international industrial-technical society; expositions, conventions, publications, board directors, committee activities. PW-8849, Business Week.

Selling Opportunities Wanted

Wanted: Manufacturer's representatives now calling on building specialties, store front, awning, or home improvement dealers and distributors, to carry companion line on commission. New, large volume, non-seasonal, high sales radiation and limited competition. Also some territories open for a few aggressive installing distributors. Mapes Industries, 2421 O St., Lincoln, Nebr.

U. S. Admin. Sales Engr., 30, 4 yrs. exper. in Mexico, desires represent U. S. firm in Latin America; RW, Amsterdam 2266-1, Mexico, D. F.

Manufacturer's Representatives—Metro. N. Y. City. Two top sales engineers available to represent mfg. of engineered industrial products in metro. N. Y. City area with combined 35 years experience in this area. Assure your aggressive sales effort—service—excellent contacts. RA-8898, Business Week.

Sales engineer, 30, for manufacturer's repre- sentative to auto industry, desires new connection with progressive office, same field. RA-8893, Business Week.

A GOOD HABIT

is any habit which can benefit you. By watching for the "clues" section you will find employment opportunities—wanted,

SPECIAL SERVICES

Complete Tooling programs performed on a firm price guaranteed basis. Excellent tool design staff plus 80 skilled tool and die makers at your service. Fast Delivery. Large work a specialty. Mechanics Incorporated, Municipal Airport, Bridgeport, Connecticut.

Do you have mathematical problems? SSA-8796, Business Week.

BUSINESS OPPORTUNITIES

Controller System for Sale, incl. patents, draw- ings, patterns, jigs etc. Is of modern design & includes specially designed hydraulic relay, 3 diff. models avail. for inspection and testing. Units offer unique safety features. BO-8768, Business Week.

Profit Opportunity for lifetime business. Start a Venetian Blind Laundry. New Machine. You can aim at a first year \$15,000 profit. L. C. Co., 442 N. Seneca, Wichita 12, Kansas.

Cash Available in Small or Large Sums for ex- pansion, inventory, new ventures, working capital, etc. Arrangements provide special tax advantages or use of money without cost on equity basis. For full details on how to get and use money profitably, from 15 major sources see How to Raise Cash by Arthur Richland. J. K. Lasser says this manual shows "How to get money to make money." For free examination copy send \$12.50 to Dept. RC-27, Business Reports, Roslyn, N. Y. You may return it within 10 days for full refund.

EQUIPMENT

Thomas Mechanical Collators save 40% to 70% in cost, time, and personnel. Speedily, easily, and accurately gather duplicated forms in 2 to 16 page sets. Portable and floor models for all needs. Write for free folder 112. Free collating analysis sheet, and name of nearest Thomas dealer. Thomas Collators, Dept. L, 30 Church Street, New York 7, New York.

TRAVEL & SPORTS

International Angling Contest in November— Belgian Congo, featuring tarpon fishing. For wives and family—Special motor trip through Northern Africa during contest. J. Forbes Armory, 1374 Mass. Ave., Cambridge, Mass.

BUSINESS SERVICES

Designers

Arnold C. Gayne Associates, Inc. Machine Design & Tooling Problems? Our staff of Engineers & Designers are prepared to work hand in hand with your organization on your Machine Design & Tooling Problems. We are in a position to design & build on a firm Quote Basis. 555 N. Washington Ave., Bridgeport, Conn.

Fleet Leasing

ROLLINS FLEET LEASING Any number of Cars and Trucks No capital investment. Better employee relations. See cars yearly. Savings of thousands of dollars. Unlimited mileage. Our Specialty: Executive Airplanes 100% TAX DEDUCTIBLE Heliotech, Delaware, Phone 3261

vacant, selling—business opportunities of all types, special services and offerings and equipment offered and wanted.

Write for further information to: Clues Section, BUSINESS WEEK
330 West 42nd St., New York 36, N. Y.

school when classes reopen in September. Furst's memory techniques have also had tryouts by management at Continental Oil Co., Lockheed Aircraft Corp., and Phillips Petroleum Co.

Accent on Economics

A new organization, the Council for Advancement of Secondary Education, has applied for a charter as a nonprofit corporation. It will ask for business help in financing better high school teaching programs. The schools, say the council's sponsors, have not taught enough about the American economy. They cite as evidence Brookings Institute findings that show that less than 5% of today's high school graduates have taken an economics course.

The council's board includes John L. Collyer, the chairman of B. F. Goodrich Co.; Walter D. Fuller, board chairman of the Curtis Publishing Co.; and John M. Hancock, a Lehman Bros. partner who serves on the boards of many top companies (BW-Jan. 17 '53, p90).

Accent on Cases

Harvard Business School has given added weight to its case-study teaching method by the appointment of Andrew Towl, now the school's assistant director of research, as director of case development.

The move separates the collection of cases for teaching purposes from project research and publication, which is now headed by Prof. Bertrand Fox, designated last week as director of research. He succeeds Dr. Melvin T. Copeland, who retired on July 1.

The business school has a file of 21,000 cases involving actual problems tackled by companies over 40 years. Last year the school added 490 cases. They are used to give students a taste of decision-making.

Exodus Continues

Many companies today are in the process of moving their offices out of New York City to suburban Westchester County (BW—Jun. 28 '52, p88). The latest one in the parade is Reichhold Chemicals, Inc., which this week leased space in the new \$2.5-million Alexander Smith, Inc., office building in White Plains.

The out-of-the-city quarters will house Reichhold's executive departments, now in Radio City, and technical units from the company's Detroit plant.

At the end of the month, Ford Motor

Co. will join the exodus—in a New Jersey direction. Its New York regional and district sales office—now scattered in several Manhattan buildings—will be relocated in neighboring Teterboro, where Ford recently completed a parts depot that includes office space. This will leave Ford with only its international division in New York.

The move is in line with a Ford policy of trimming rent costs and bringing scattered offices in the big cities under one roof—in its own buildings, whenever possible. Since World War II, Ford has been putting up parts depots across the country to get closer to its dealers. It has completed 14 and has three more on tap. While it's at it, Ford is also building office space.

Ford's Chicago offices will be moved to a depot completed last week. Another change is contemplated in Pittsburgh with the completion of a depot in November.

MANAGEMENT BRIEFS

The number of personnel men on company staffs is on the upgrade, according to the University of Minnesota's Industrial Relations Center. Its current survey shows that there is one personnel man to every 135 employees this year, compared with one per 164 in 1952. Salaries of personnel men have jumped from a \$9,685 average in 1952 to \$10,060.

Decision, Inc., a Cincinnati company that came out this year with a book in which local companies described themselves to graduating high school students (BW—Feb.28'53,p122), is going to put out similar books on Dec. 1 in five other cities—Pittsburgh, Delaware Valley (Philadelphia), St. Louis, Cleveland, and Los Angeles.

National Sales Executive, Inc., has helped Rutgers University set up its new Graduate School of Sales Management and Marketing. First classes got under way Aug. 10. The school is designed to give salesmen updated advanced training along the same lines as General Electric's program for its sales executives (BW—Jul.4'53,p66).

General Mills, Inc., gets only 52% of its sales volume from flour, according to board chairman Harry A. Bullis' annual statement to stockholders this week. That's against 74% only 15 years ago. He and president Charles H. Bell cited these developments in the company: a continuation of diversification; decentralization of management into seven operating divisions; better techniques for employee selection; development of personnel training programs.

ADVERTISERS IN THIS ISSUE

Business Week—August 22, 1953

ACME STEEL CO.	45	LINE MATERIAL CO.	89
Agency—Leo Burnett Co., Inc.		Agency—Erwin, Wasiey & Co., Ltd.	
ADAMS & WESTLAKE CO.	89	LINK-BELT CO.	2
Agency—Henri Hurst & McDonald, Inc.		Agency—Klaus Van Pietersen Dunlap, Inc.	
ALLIS-CHALMERS MFG. CO.	20-21	LOWRY'S REPORTS, INC.	130
Agency—Compton Adv. Inc.		Agency—Albert Frank-Guenther Law, Inc.	
ALUMINUM CO. OF AMERICA (CHEMICAL)	42	LUKENS STEEL CO.	67
Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Fuller & Smith & Ross, Inc.	
AMERICAN APPRAISAL CO.	78	LYON METAL PRODUCTS, INC.	127
Agency—The Buchen Co.		Agency—Heincke, Meyer & Plinn, Inc.	
AMERICAN RADIATOR & STANDARD		McGraw-Hill Book Co., Inc.	132
SANITARY CORP.	16	McGraw-Hill Publishing Co.	116-117
Agency—Batten, Barton, Durstine & Osborn, Inc.		McLouth Steel Corp.	115
ANCHOR POST PRODUCTS, INC.	62	Agency—Denman & Baker, Inc.	
Agency—VanSant, Dugdale & Co., Inc.		MERCURY MFG. CO.	62
ANGIER CORP.	25	Agency—O'Grady-Anderson-Gray, Inc.	
Agency—Larson Handall		METAL OFFICE FURNITURE CO.	86
ASSOCIATION OF AMERICAN RAILROADS	44	Agency—Wesley Area & Assoc., Inc.	
BALTIMORE & OHIO RAILROAD	133	NATIONAL CASH REGISTER CO.	Cover 2
Agency—The Richard A. Foley Adv. Agency, Inc.		Agency—McCann-Erickson, Inc.	
BARIUM STEEL CORP.	22	NATIONAL STARCH PRODUCTS, INC.	87
Agency—James Thomas Chirug Co., Inc.		Agency—G. M. Harford Co.	
BAY WEST PAPER CO. (DIV. OF MOSINEE		NEKOOSA-EDWARDS PAPER CO.	107
PAPER MILL CO.)	70	Agency—The Craner-Kraswell Co.	
Agency—Klaus Van Pietersen-Dunlap, Inc.		N. C. DEPT. OF CONSERVATION &	
BECHTEL CORP.	78	DEVELOPMENT	79
Agency—Lyder & Ingram, Ltd.		Agency—Bennett, Inc.	
BENDIX AVIATION CORP. (FRIEZ		OLIN INDUSTRIES, INC. (ARMS &	
INSTRUMENT DIV.)	86	AMMUNITION DIV.)	47
Agency—MacManus, John & Adams, Inc.		Agency—D'Arcy Adv. Co.	
BROWN CO.	114	OREGON LUMBER CO.	65
Agency—J. M. Mathies, Inc.		Agency—Pacific National Adv. Agency	
CARRIER CORP.	120	PEERLESS STEEL EQUIPMENT CO.	106
Agency—N. W. Ayer & Son, Inc.		Agency—R. E. Lovelock Corp.	
CHAMBERSBURG ENGINEERING CO.	9	PHILLIPS PETROLEUM CO.	11
Agency—Willard G. Myers Adv. Agency		Agency—Lambert & Fessler, Inc.	
CHESAPEAKE & OHIO RAILWAY CO.	84-85	PITTSBURGH PLATE GLASS CO. (WIRE	
Agency—Robert Conahay Inc.		BRUSH DIV.)	55
CLUES (CLASSIFIED ADVERTISING)	134	Agency—VanSant, Dugdale & Co., Inc.	
COLSON CORP.	109	POWER PRODUCTS CORP.	48
Agency—Carr Liggett Adv. Inc.		Agency—Camm, Cottigan & Belts, Inc.	
COLUMBIA RIBBON & CARBON MFG. CO.	124	RAILWAY EXPRESS AGENTS	129
Agency—E. M. Freytag Assoc., Inc.		Agency—Fuller & Smith & Ross, Inc.	
COLUMBIA-SOUTHERN CHEMICAL CORP.	96	RAPIDS-STANDARD CO., INC.	61
Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Wesley Area & Assoc., Inc.	
CONTINENTAL CAN CO.	68-69	RELANCE ELECTRIC & ENGINEERING CO.	83
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—Meldrum & Fennsmith, Inc.	
CUSHMAN & DENISON MFG. CO.	130	REINGTON ARMS CO.	126
Agency—H. T. O'Connell Co.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
DAVIDSON CORP.	91	REYNOLDS METALS CO.	70
Agency—Marsteller, Gelhardt & Reed, Inc.		Agency—Buchanan & Co., Inc.	
DAVIDSON CHEMICAL CORP.	90	RHINELANDER PAPER CO.	92
Agency—St. Georges & Keyes, Inc.		Agency—Frank C. Nalzer, Inc.	
DEARBORN CHEMICAL CO.	8	ROHM & HAAS CO. (PLASTICS DIV.)	49
Agency—The Buchen Co.		Agency—John Falkner Arndt & Co., Inc.	
DEMPTER BROTHERS, INC.	84	SCOTT PAPER CO.	131
Agency—Charles R. Kane Co.		Agency—J. Walter Thompson Co.	
F. W. DODGE CORP.	130	SELAS CORP. OF AMERICA	15
Agency—Albert Frank-Guenther Law, Inc.		Agency—A. E. Aldridge Assoc.	
DOUGLAS AIRCRAFT CO., INC.	51	SHAKEPROOF DIV. OF ILLINOIS TOOL	
Agency—J. Walter Thompson Co.		WORKS	Cover 4
DOUGLAS FIR PLYWOOD ASSOC.	74	Agency—Waldie & Briggs, Inc.	
Agency—The Condon Co.		SINCLAIR OIL CORP.	35
DOW CORNING CORP.	10	Agency—Doremus & Co.	
Agency—Don Waglitz		SPERRY GYROSCOPE CO.	6-7
DUMORE CO.	104	Agency—Chas. Dallas Beach Co., Inc.	
Agency—Klaus Van Pietersen-Dunlap, Inc.		STANDARD CONVEYOR CO.	71
THOMAS A. EDISON, INC. (STORAGE		Agency—Klaus Van Pietersen-Dunlap, Inc.	
BATTERY DIV.)	53	STANDARD PRESSED STEEL CO.	123
Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Gray & Rogers	
ELWELL-PARKER ELECTRIC CO.	8	STROMBERG-CARLSON CO.	118
Agency—The Bayless-Kerr Co.		Agency—Charles L. Rumlitz & Co., Inc.	
ERIE RAILROAD CO.	12	SUN OIL CO.	103
Agency—The Griswold-Eshleman Co.		Agency—Gray & Rogers	
FAPNIR BEARING CO.	Cover 3	TAYLOR FIBRE CO.	56-57
Agency—Horton-Noyes Co.		Agency—The Altkin-Kynett Co.	
A. B. FARQUHAR CO.	36	THOMPSON PRODUCTS, INC.	60
Agency—VanSant, Dugdale & Co., Inc.		Agency—Meldrum & Fennsmith, Inc.	
GENERAL ELECTRIC CO. (LAMP DEPT.)	26	THE TIMKEN-DETROIT AXLE CO.	4-5
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—MacManus, John & Adams, Inc.	
GENERAL METALS CORP.	41	TOLEDO SCALE CO.	50
Agency—The McCarty Co.		Agency—Beeson-Heichert, Inc.	
THE B. F. GOODRICH CO.	1	TRANS WORLD AIRLINES, INC.	80
Agency—The Griswold-Eshleman Co.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
GOODYEAR AIRCRAFT CORP.	14	TRAVELETTOR CORP.	105
Agency—Kaiser Agency, Inc.		Agency—Moore & Co., Inc.	
GREAT LAKES STEEL CORP.	81	ALBERT TROSTEL PACKINGS LTD.	90
Agency—Campbell-Ewald Co., Inc.		Agency—The Craner-Kraswell Co.	
CHARLES R. HADLEY CO.	52	TRUSCON STEEL DIV., REPUBLIC STEEL	
Agency—The Perrett Co.		CORP.	105
HINDE AND DAUCH	46	Agency—Meldrum & Fennsmith, Inc.	
Agency—Howard Swink Advertising Agency, Inc.		UNION BAG & PAPER CORP.	95
A. C. HORN CO., INC.	86	Agency—Smith, Hazel & Snyder, Inc.	
Agency—Randolph & Elliott		UNITED-CARR L'ASTENER CORP.	101
HOTELS STAYLER CO., INC.	38	Agency—H. B. Humphrey, Alley & Richards, Inc.	
Agency—Young & Rubicam, Inc.		UNITED GAS PIPE LINE CO.	93
HUDSON PULP & PAPER CORP.	61	Agency—Rosell & Jacobs, Inc.	
Agency—Robertson, Huey & Groch, Inc.		U. S. AIR CONDITIONING	130
JONES & LAMSON MACHINE CO.	37	Agency—Jaffe Adv. Agency	
Agency—Henry A. Loudon Adv. Co., Inc.		UNITED STATES RUBBER CO.	121
KELSEY HAYES WHEEL CO.	19	Agency—Fletcher D. Richards, Inc.	
Agency—Zimmer, Keller & Calvert, Inc.		VIRGINIA METAL PRODUCTS, INC.	63
KING TYPOGRAPHY SERVICE CORP.	130	Agency—Cayton, Inc.	
Agency—Street & Finney Adv.		WALLACE SUPPLIES MFG. CO.	58
KOHLER CO.	102	WARD LEONARD ELECTRIC CO.	94
Agency—Boche, Williams & Cleary, Inc.		Agency—James Thomas Chirug Co., Inc.	
LEHMAN BROTHERS	73	WARNER & SWASEY CO.	13
Agency—Borah & Co.		Agency—The Griswold-Eshleman Co.	
LINDE AIR PRODUCTS CO.	125	WESTINGHOUSE ELECTRIC CORP.	
Agency—J. M. Mathies, Inc.		(ELEVATOR DIV.)	76-77
		Agency—Fuller & Smith & Ross, Inc.	
		JOHN ZINK CO.	106
		Agency—Watts, Payne Adv. Inc.	

Key to a \$230-billion Mystery

What is the big force keeping the American economy running full steam ahead? The answer is the customer. During the postwar boom, for example, consumer spending has played a far more important role than government spending. This year, consumer expenditures will run about \$230-billion. Next year, as government spending, particularly in defense, is reduced, the customer and his buying plans will be of crucial importance to our economic well-being.

With all the increasing recognition of the consumer's role, there is very little information available about his intentions. The fact is that the consumer is pretty much of a mystery. Despite heaps of figures on consumers' incomes, estimates of what and how much consumers will buy are largely a matter of shrewd guesswork. Similarly, despite the wealth of statistics on population growth and shifts, plans for opening up new markets are still crude.

The Survey of Consumer Finances, conducted by the Federal Reserve System in cooperation with the University of Michigan, has been the best source of information on the consumer since it was instituted in 1946. This survey proved itself during the boom, when most other sources consistently underestimated consumer buying. But, as good as the Fed's survey is now, it does not go far enough.

Too Little and Too Late

For one thing, its reports are issued piecemeal. The survey is made during January and February, but preliminary findings are not released until mid-March. The more detailed analysis of the general financial position of consumers and their buying plans is not issued for six months or more. For another thing, the reports are too limited in scope. They cover chiefly the major durables, autos, and housing.

There is, of course, an inevitable lag between the time a survey is made and the time it is published. It is also true that a wider coverage entails much greater expense. Yet *BUSINESS WEEK* believes that the increasing need for more information on people and their plans to buy—and the general excellence of the surveys—make it imperative that they be improved.

Light on the Mystery

In fact, we need a continuous stream of information on consumer intentions. This could be done if the Federal Reserve made its survey more frequently and published the results quarterly.

In addition, the surveys would be much more valuable if they were expanded to cover purchases in all fields. For example, no one needs information of their cus-

tomers' plans more than do the textile and apparel industries.

This does not mean that any survey will ever be able to provide exact forecasts. All that they can provide is a greater amount of information to help businessmen formulate plans.

This is precisely what is needed now, for the customer is the most mysterious part of our economy. The more we know of him, the better can we cope with him.

Priority for the Atom

Congress should give a high priority to new atomic energy legislation next year. It should, that is, if the nation is to exploit this promising source of electric power within the reasonably near future.

The government, through spokesmen for both the administrative and congressional branches, has said that harnessing the atom to produce electricity is largely a job for private industry from here on out. But the five weeks of hearings recently wound up by the Joint Committee on Atomic Energy clearly demonstrated that industry can do little to develop economic power from the atom until the Atomic Energy Act of 1946 is amended.

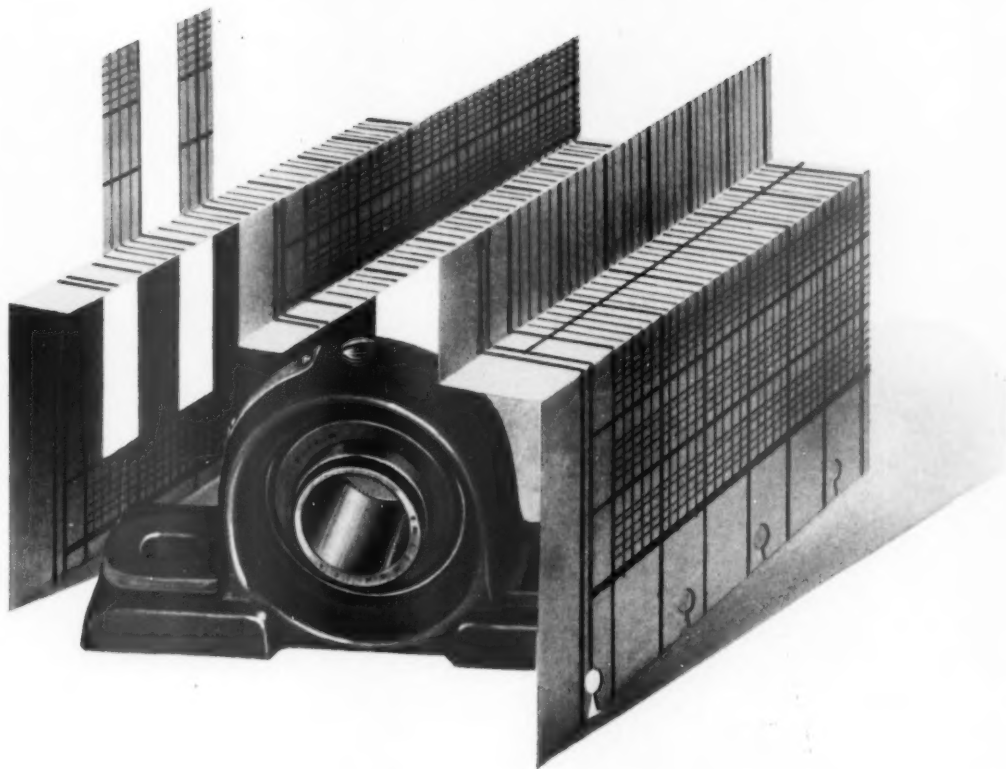
Certainly industry cannot engage in the kind of costly developmental work that is the next step toward atomic power without changes in at least two provisions of the present law. These are the restrictions against private use of reactors, the atomic furnaces that will produce power, and of the fissionable materials needed to fuel them.

Atomic power development now has progressed well beyond the basic research stages. What really is needed now is the practical engineering that will show whether existing theories can be translated into economic power facilities.

This means detailed engineering designs, mock-ups, perhaps pilot plants. Such work is costly even in well-established industries. It will run into millions of dollars for atomic power.

But what industrialist can talk his board of directors, much less his bankers, into putting up millions for a project forbidden by federal law? He cannot guarantee a return on the money. He can only express the pious hope that Congress can be persuaded to make the expenditure legal.

Other sections of the Atomic Energy Act, notably its restrictions on worthwhile private patents, must be revised before we can establish a flourishing atomic power industry. But these can wait. What is needed now is to let industry come to grips squarely with the economics of power from the atom.



LOW-COST HOUSING PROJECT ... *for management!*

If it hadn't been for a *housing* problem, industry might have modernized years ago with ball bearings . . . in plant equipment as well as products. There never was any question of the advantages of ball bearings for power transmission. But, bearings must be housed, and housings were often complicated and costly to design.

Then Fafnir developed a line of transmission units which included both housings and provision for lubrication. These ready-to-use "packaged" bearings offer all the advantages of ball bearing performance — savings in power, increased production and lower maintenance costs. Easy to install, Fafnir "Economy

Packages" come in shapes and sizes to fit a great variety of machines and equipment.

Here is another instance of the Fafnir attitude and aptitude for solving bearing problems. It's a way of looking at bearings from the user's point of view — an ability to come up with the right bearing to fit the need.

This "you" approach to ball bearing design (in which *top quality* is not the end but only a beginning) could have an important bearing on your problem. Fafnir's experience, remember, is more than 40 years long — and industry *wide*. The Fafnir Bearing Company, New Britain, Conn.

FAFNIR ECONOMY PACKAGES . . .

These units, equipped with precision bearings, are complete with housings, seals and shields, ready to mount.



**FLANGE
CARTRIDGES**
... standard and
heavy series



**CYLINDRICAL
CARTRIDGES**
... standard and
heavy series



PILLOW BLOCKS
... standard and
heavy series

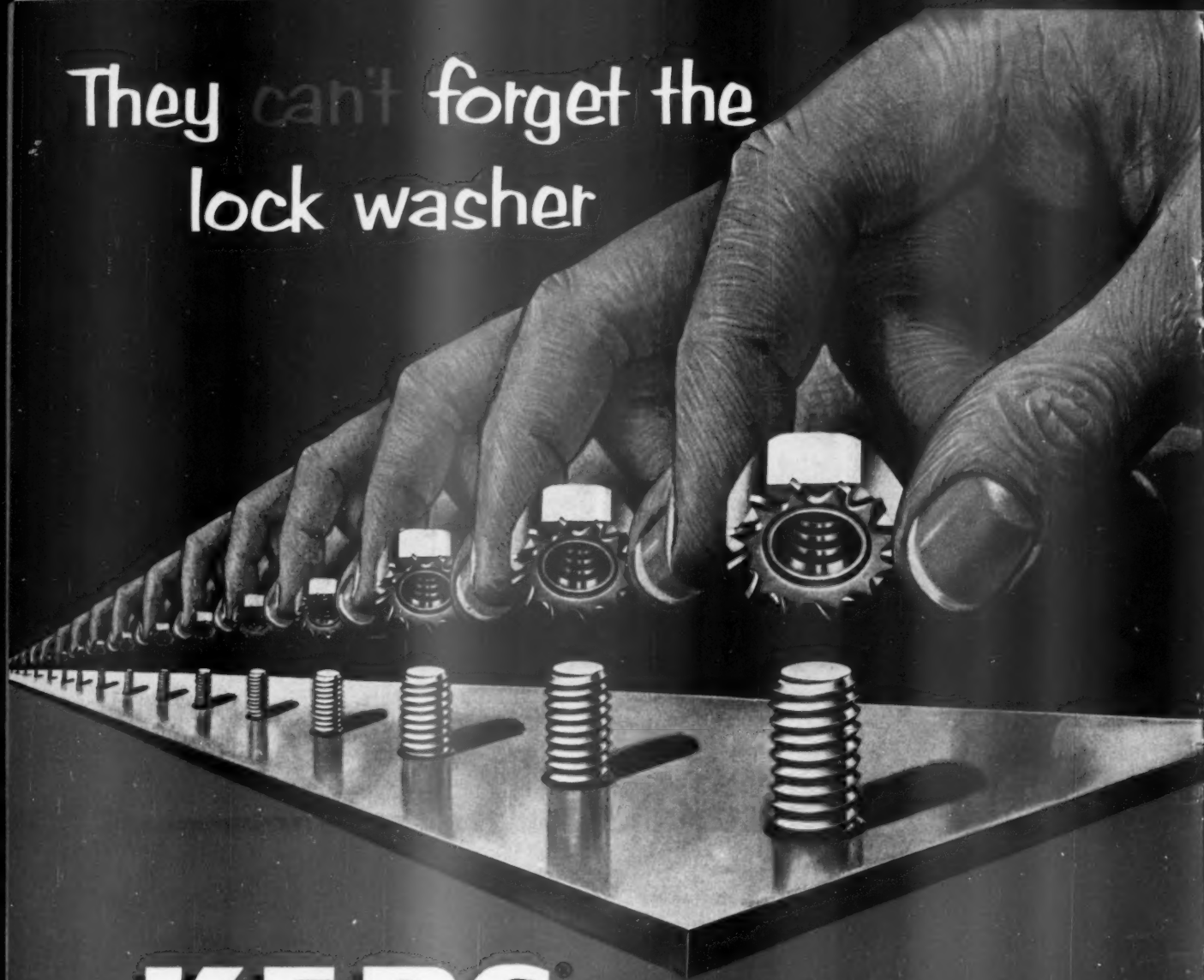
*More than top quality in ball bearings
... it's what Fafnir has on the ball*

FAFNIR
BALL BEARINGS

MOST COMPLETE


LINE IN AMERICA

They can't forget the
lock washer




KEPS...

THE PRE-ASSEMBLED NUT AND WASHER

Stop worrying about loose connections...  use KEPS! And be sure

to specify KEPS with SHAKEPROOF® Lock Washers  for maximum locking efficiency!

Tapered-twisted teeth  bite deep to assure positive vibration protection
against loosening. Try KEPS now!

FREE... PRODUCT ANALYSIS SERVICE

Shakeproof fastening specialists, experienced with the fastening requirements of nearly every mass-assembly industry, are at your service to help your staff develop improved, lower cost fastening methods.

HAVE YOUR PRODUCT "FASTENING ANALYZED"

SHAKEPROOF



"Fastening Headquarters"

DIVISION OF ILLINOIS TOOL WORKS

St. Charles Road, Elgin, Illinois • Offices in principal cities

In Canada: Canada Illinois Tool Works Ltd., Toronto, Ontario

America's great resources plus a free economy made this business possible!